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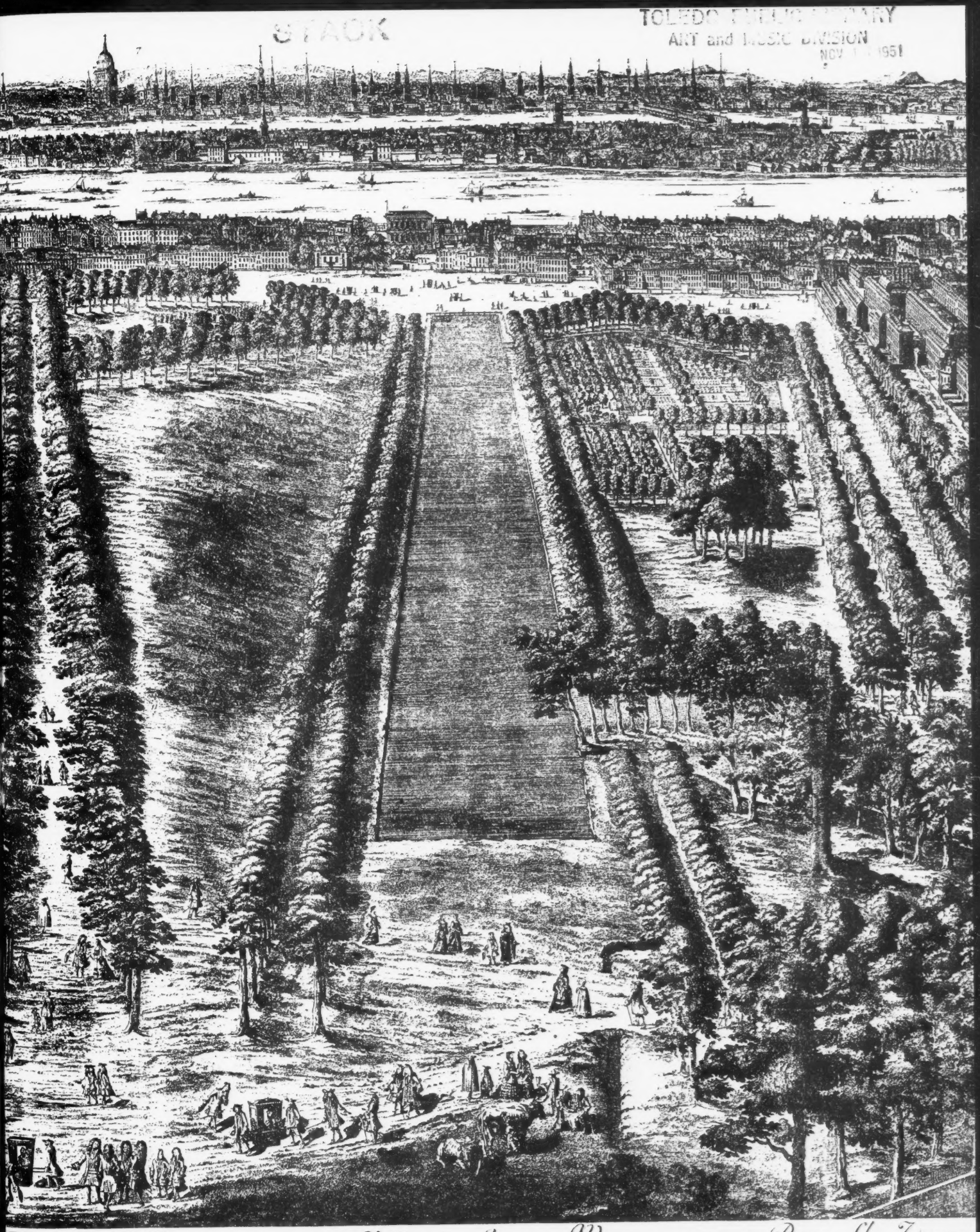

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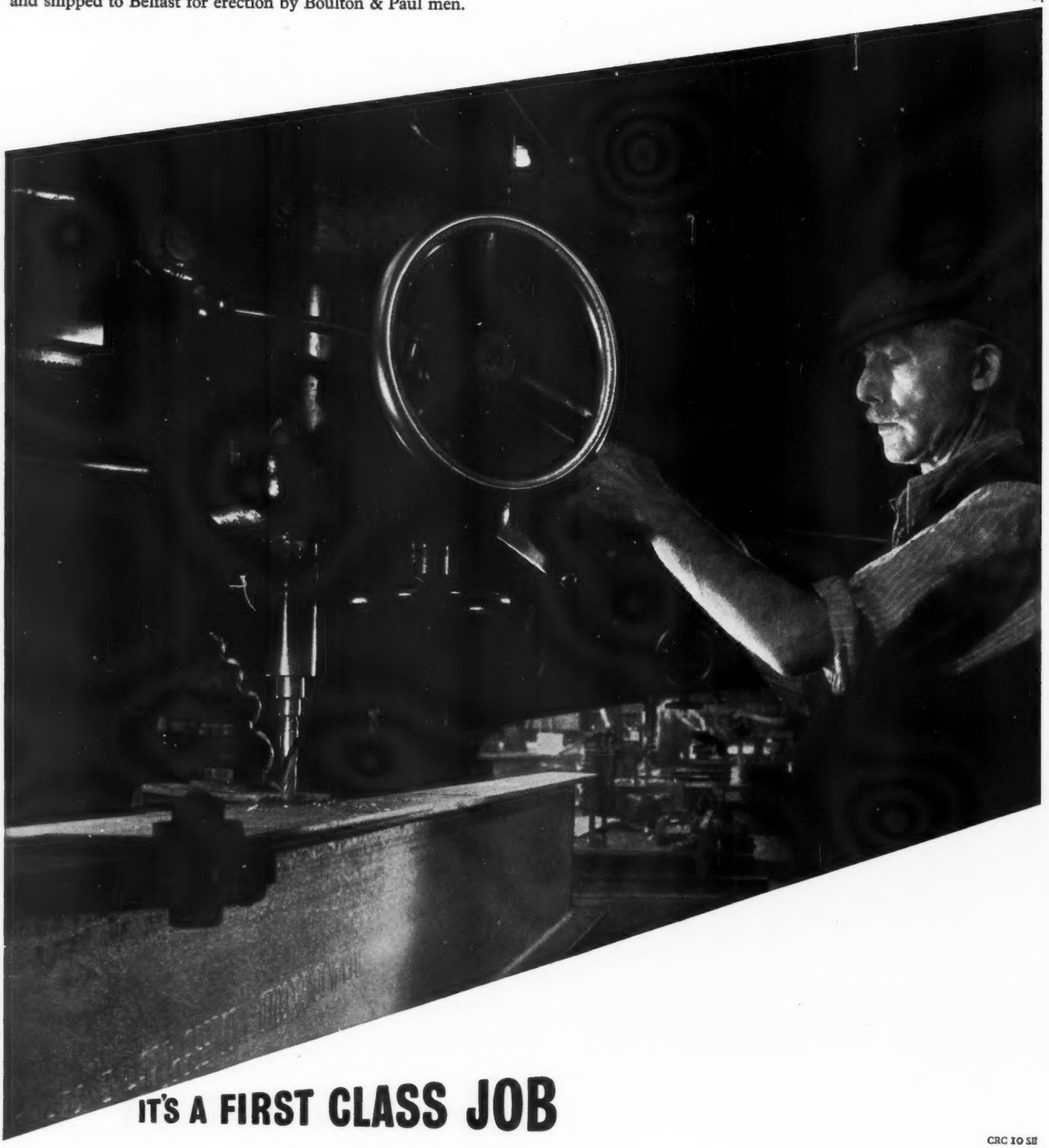

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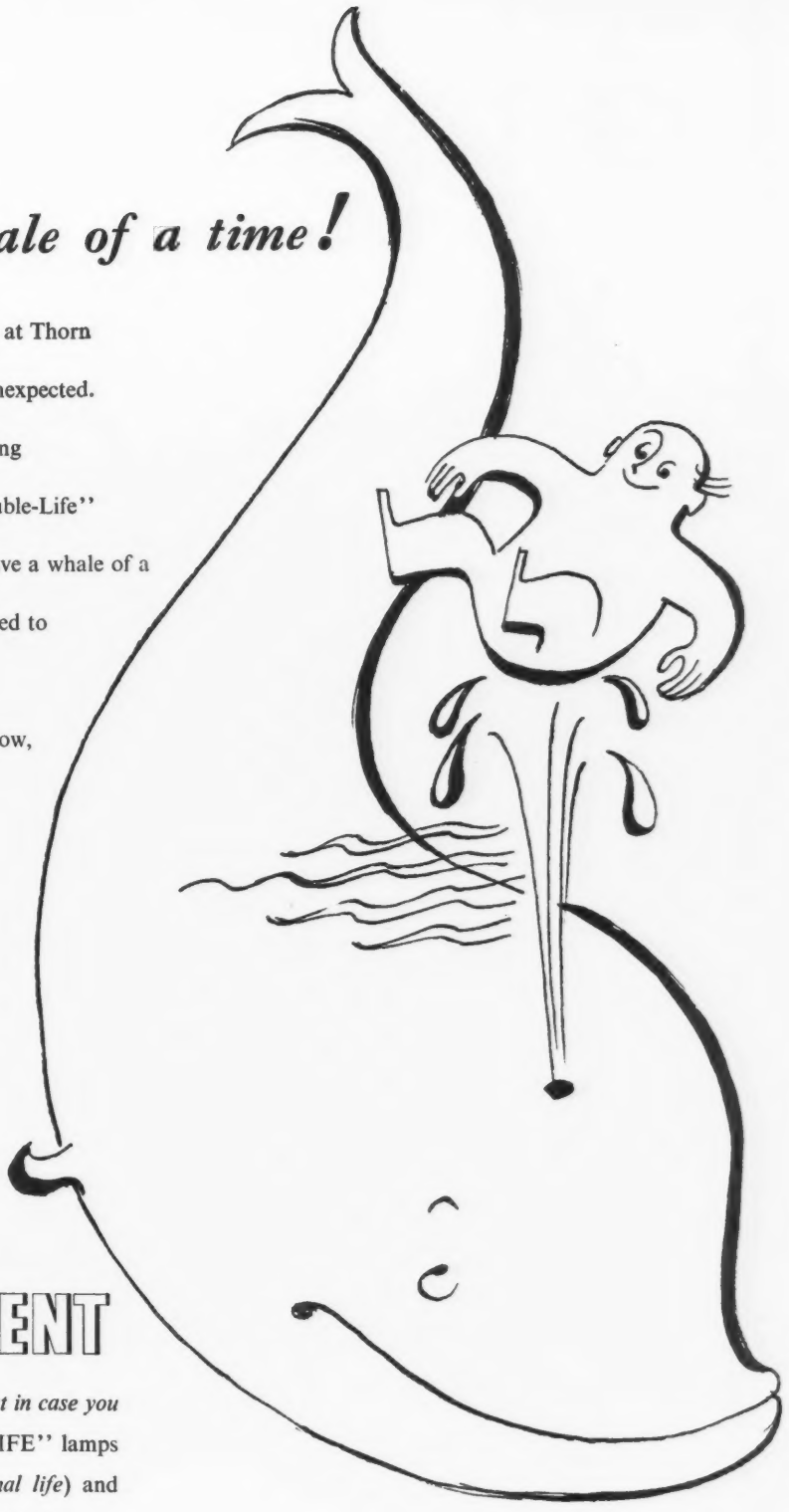

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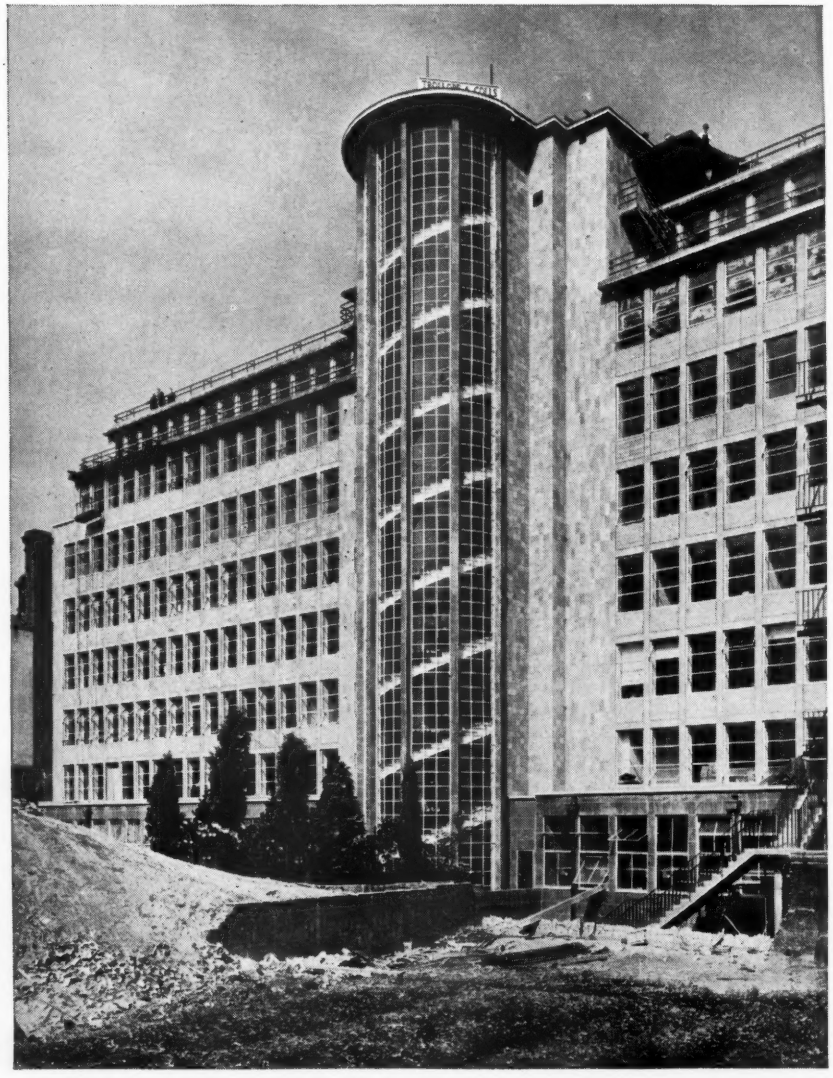
IN THE FESTIVAL YEAR



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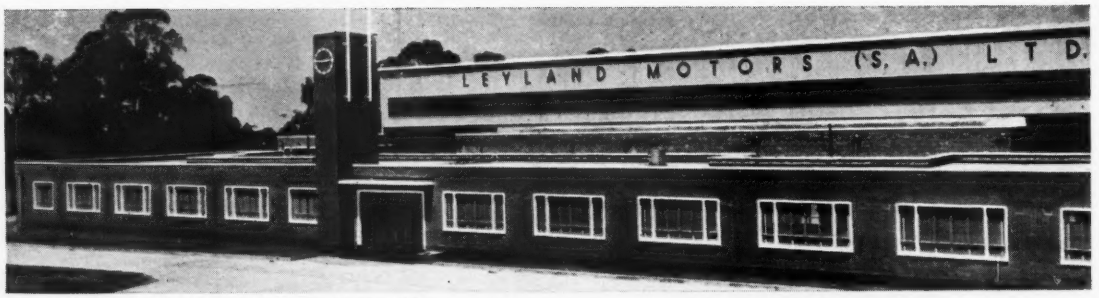

Factory for Leyland Motors Limited in South Africa

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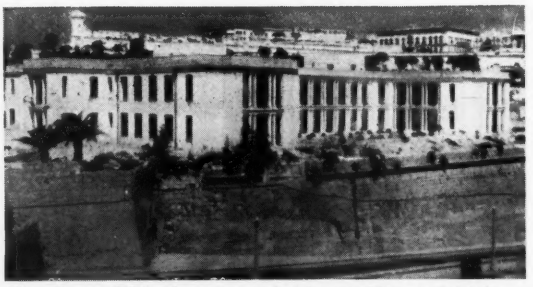

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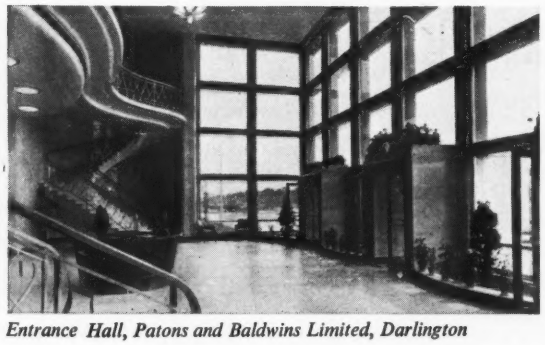

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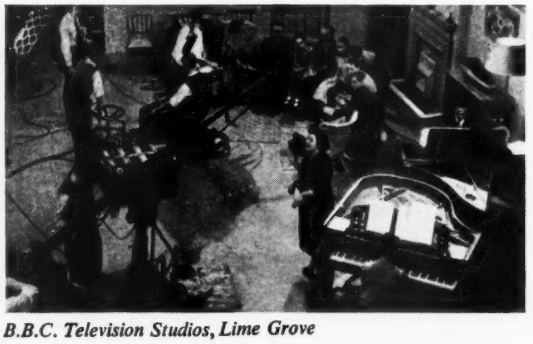
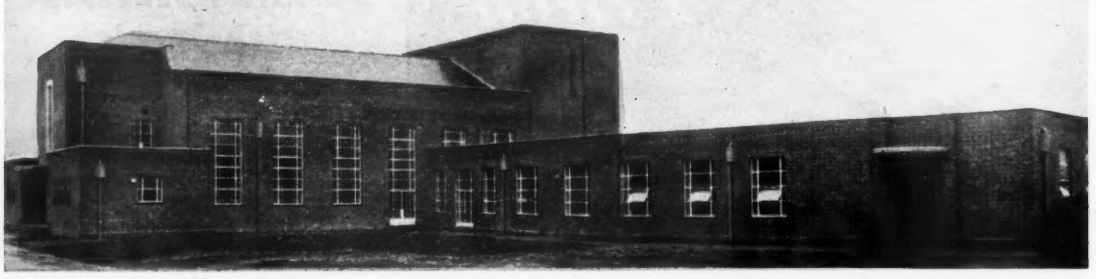
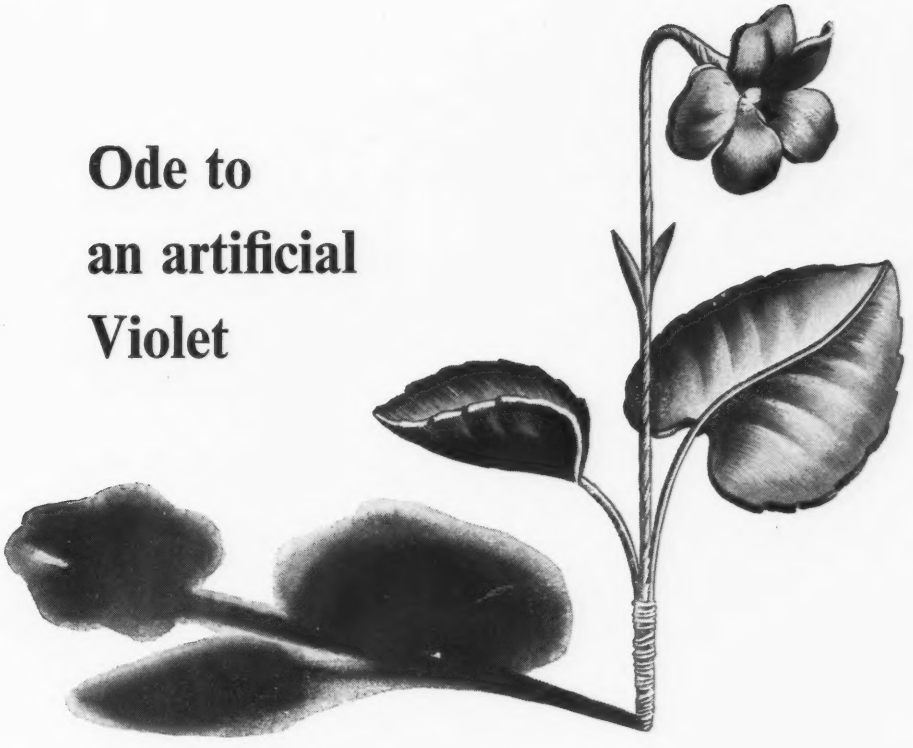


B.B.C. Television Studios, Lime Grove



Club House at Esso Refinery, Fawley

Ode to an artificial Violet



Shelley, Wordsworth and Keats *might* have written odes to artificial flowers—but it hardly seems likely. Ingenious as they are, flowers of paper and silk have little to inspire the poet.

It's much the same with substitutes for wood. Wood is a natural *living* material with a character all its own. No two pieces of timber are ever exactly alike. Each is a thing of beauty in itself.

All very well, you may think—but what about the timber supply situation? Well, there are certain shortages still—but on the other hand there is a steady expansion in the supply of timber, and many hardwoods are being imported which can be obtained without licence. There may be one exactly fitted to the job you have in mind. Why not drop a line to the Timber Development Association and find out?

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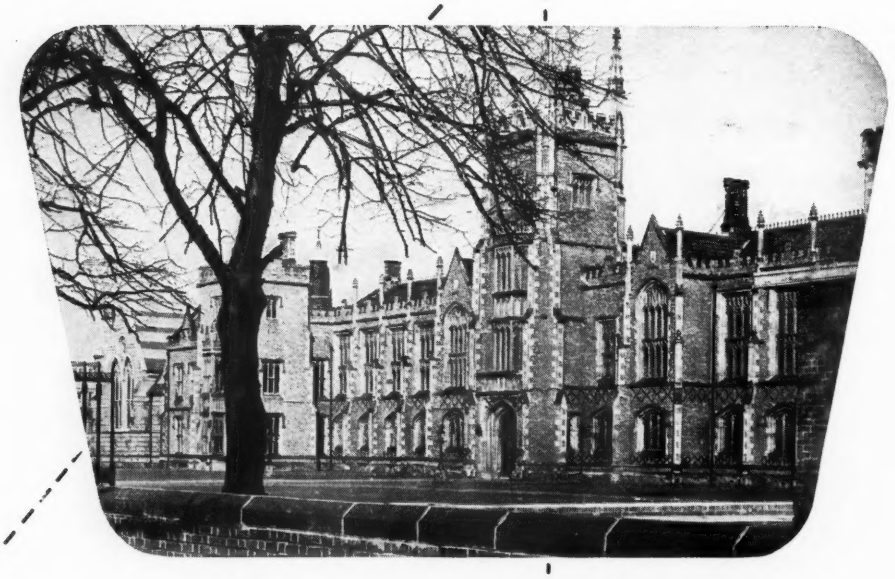
THOUGHT FOR FOOD



Food, to the undergraduate, is a subject worthy of thought and care. To those preparing his meals, balancing calories and digestion against rugger after lunch, the task is greatly simplified if the most efficient cooking appliances are available. Queen's University, Belfast, has solved this aspect of the problem by calling in Radiation (Large Cooking Equipment) Ltd., who have supplied an installation exactly suited to requirements.

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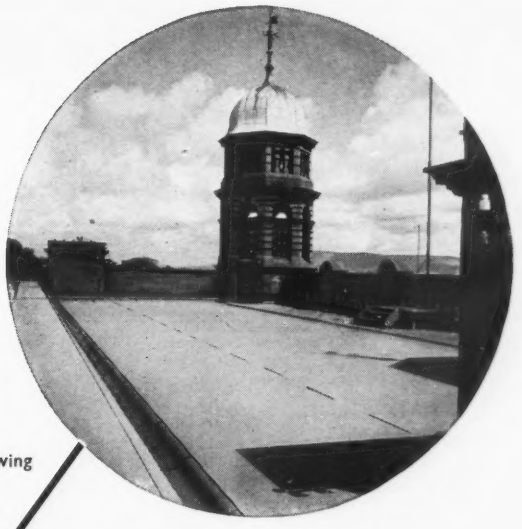
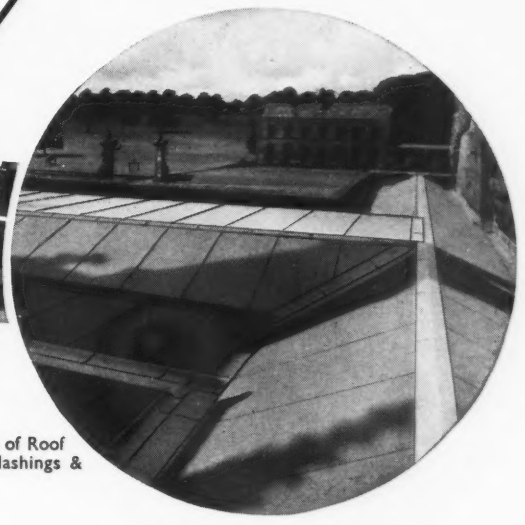


Section of Roof showing Gutters and Outlets.

Stonyhurst College, Hurst Green, Whalley.
Architect : Wilfrid C. Mangan, M.I.A.A.S.



Another Section of Roof showing Hips, Flashings & Gutters.

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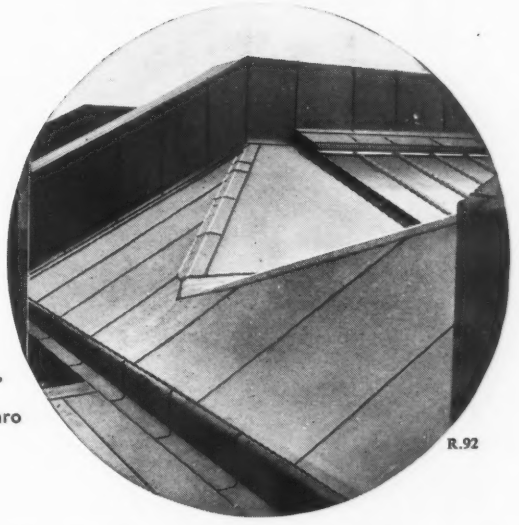

Section of Roof of Macfarlane Lang & Co. Ltd., Osterley.
Architects : James M. Monro & Son.

R.92

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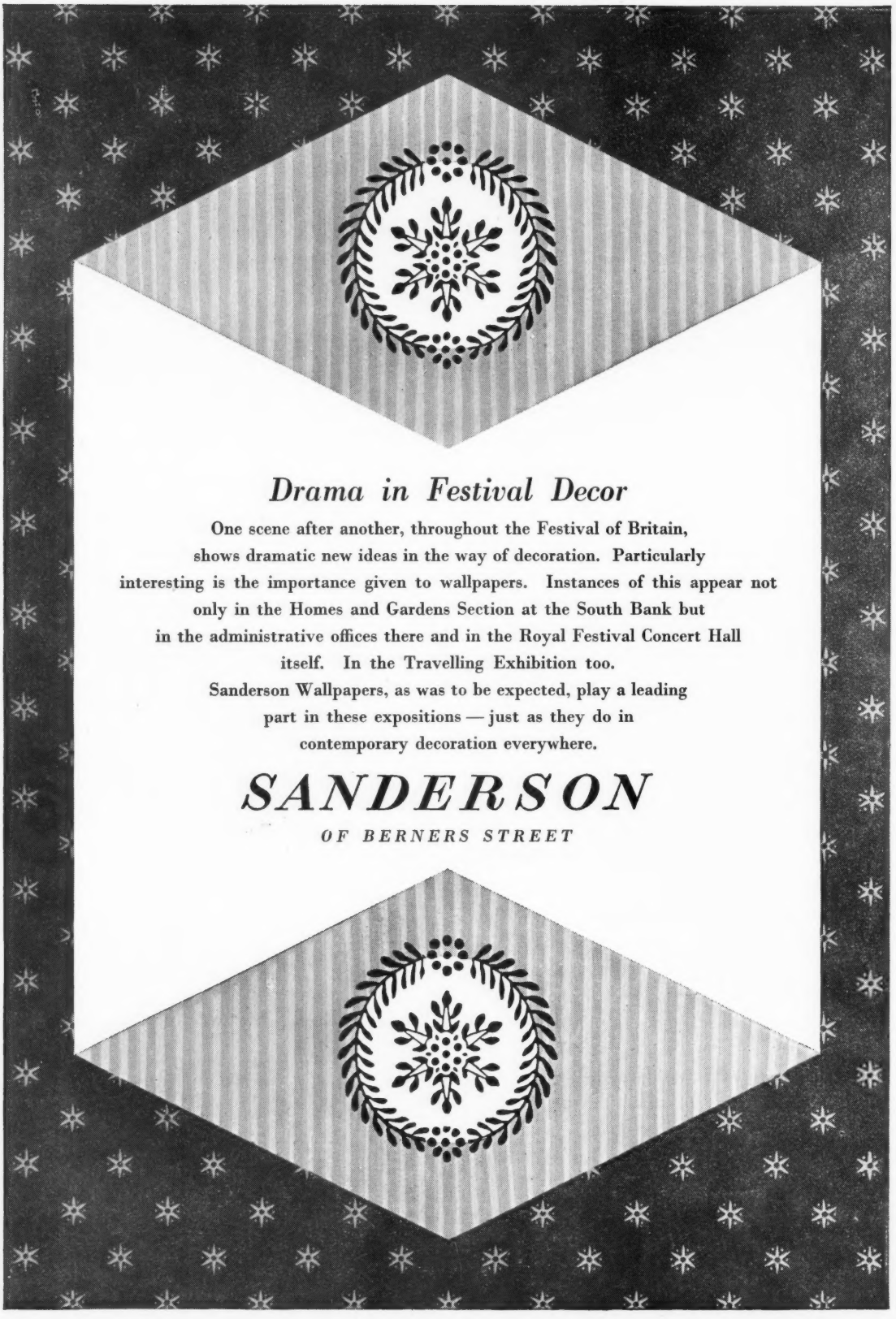

Drama in Festival Decor

One scene after another, throughout the Festival of Britain, shows dramatic new ideas in the way of decoration. Particularly interesting is the importance given to wallpapers. Instances of this appear not only in the Homes and Gardens Section at the South Bank but in the administrative offices there and in the Royal Festival Concert Hall itself. In the Travelling Exhibition too. Sanderson Wallpapers, as was to be expected, play a leading part in these expositions — just as they do in contemporary decoration everywhere.

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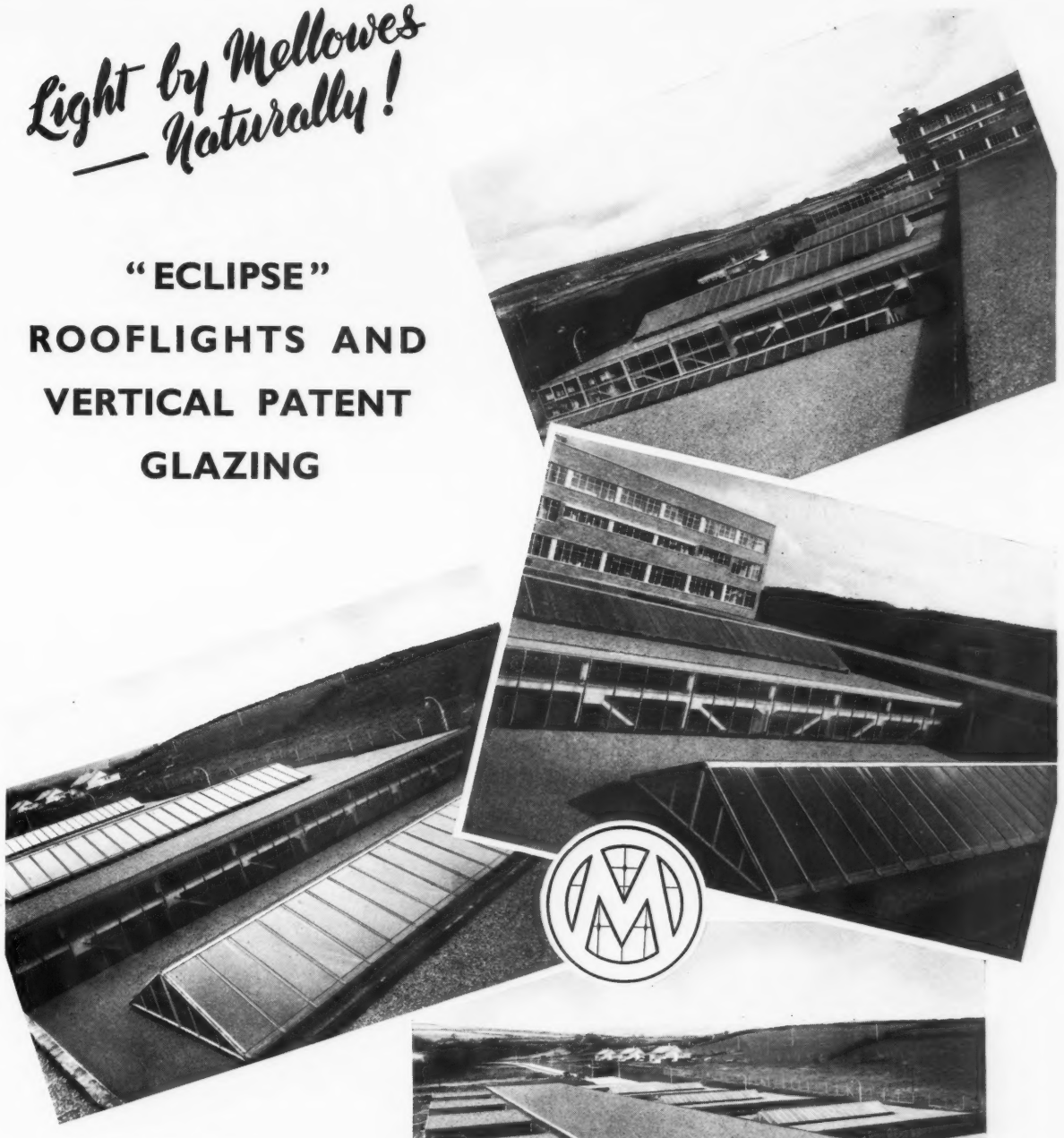
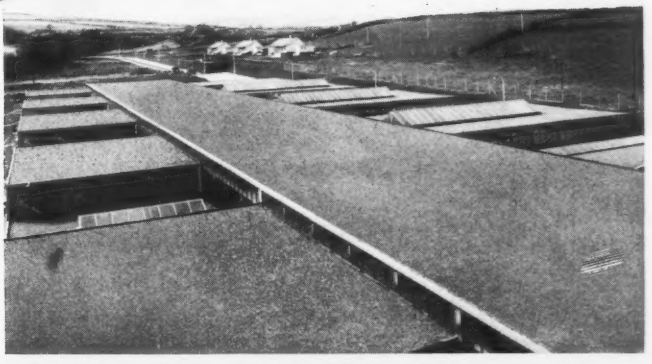


Bridgend Paper Mills.

Architects:
Henry Budgen & Co., F.R.I.B.A.
Cardiff.



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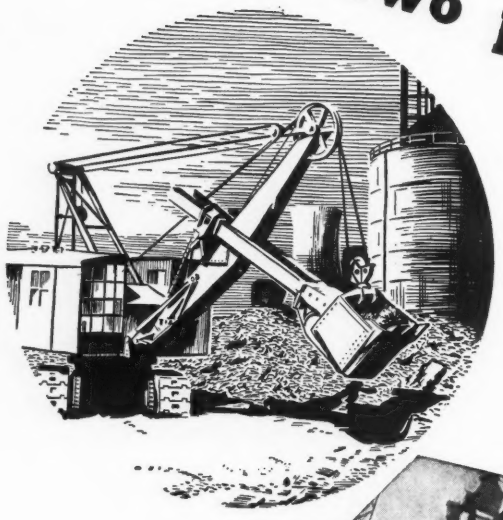

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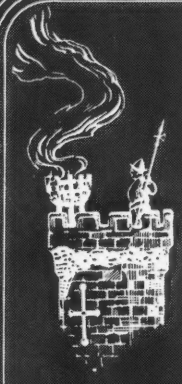

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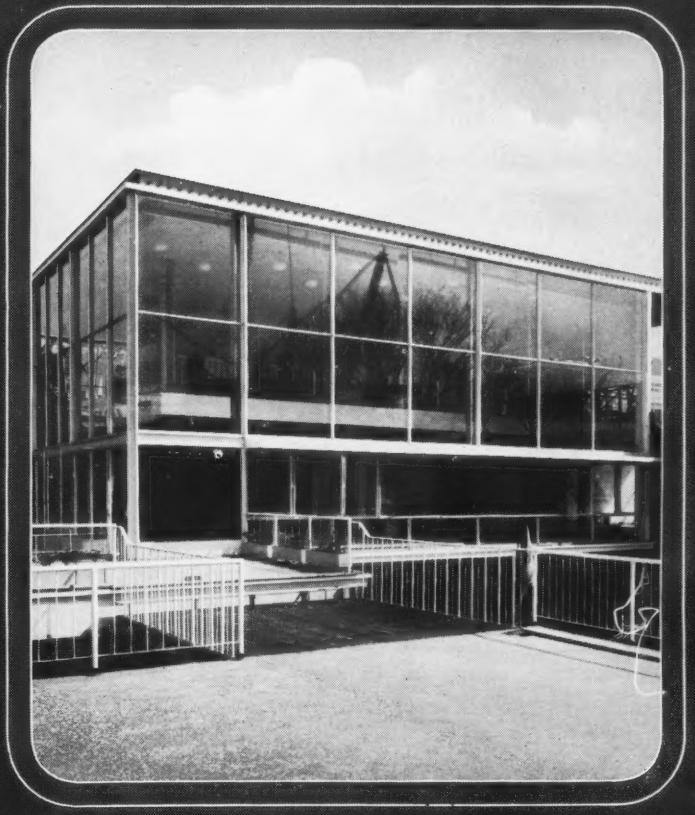

Installed at the REGATTA RESTAURANT, Festival of Britain
Architects: Misha Black, O.B.E., F.S.I.A. and Alex. Gibson, A.R.I.B.A.

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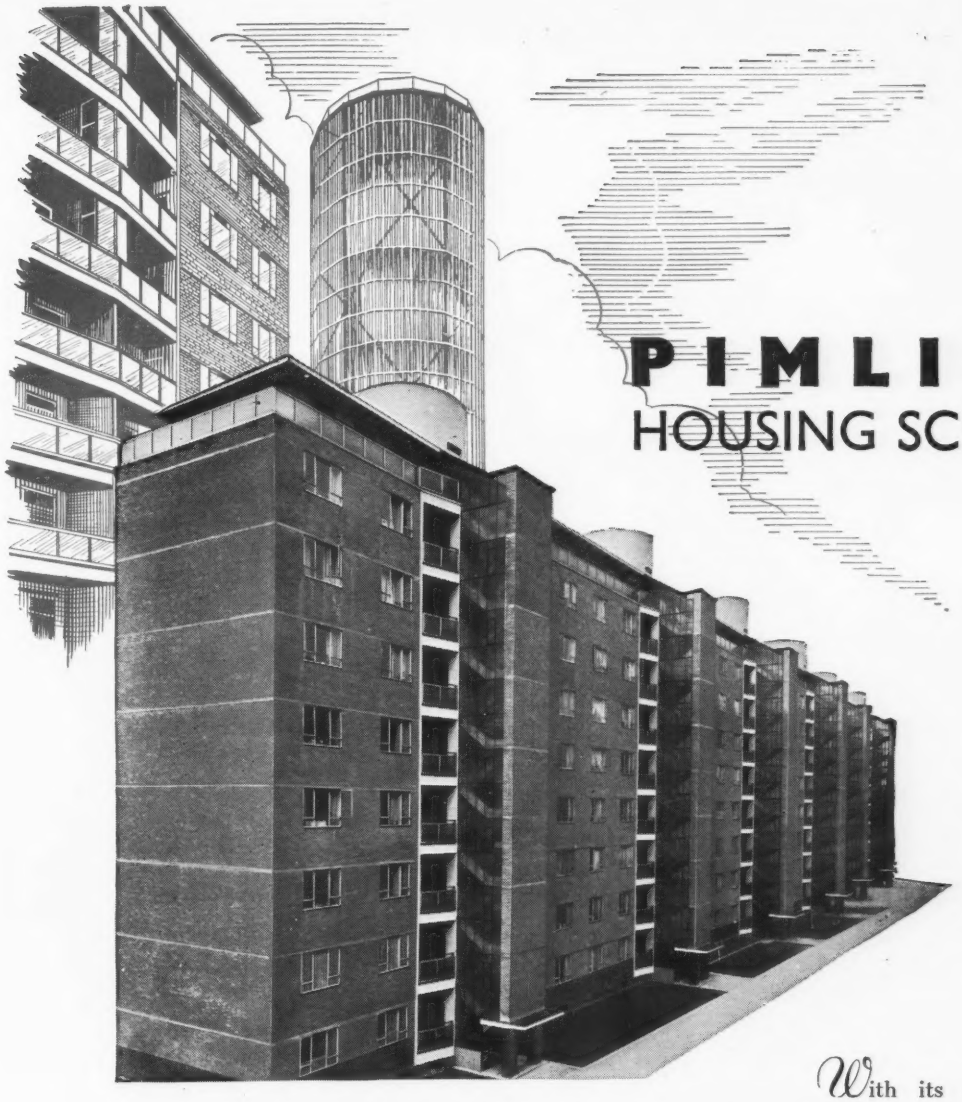

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IS THE HISTORY OF

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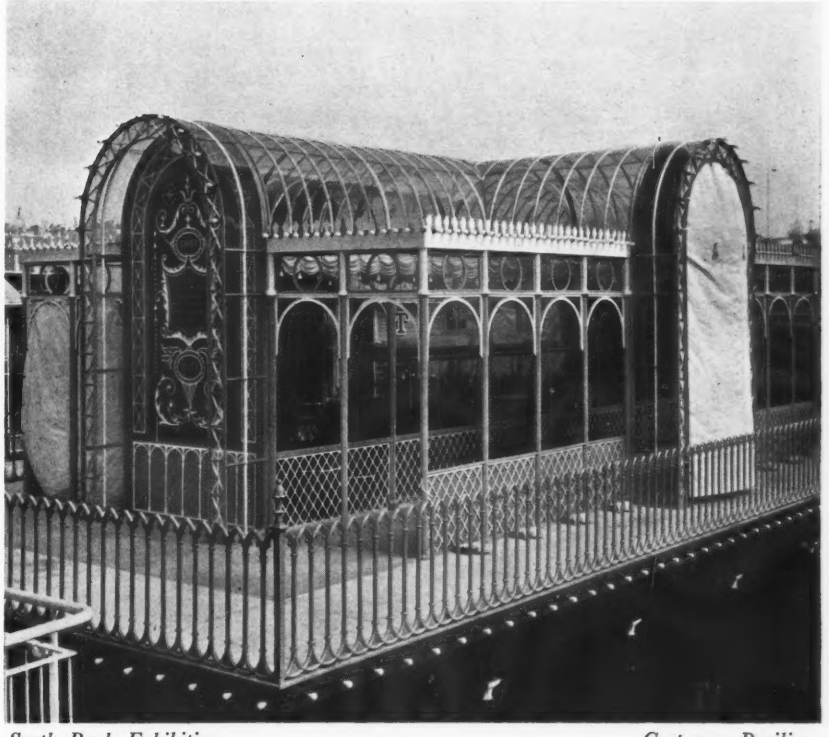
CONTEMPLATION OF THE FESTIVAL BUILDINGS
MIGHT INDICATE TO THE ARCHITECT THAT
HIS VICTORY IS IN SIGHT



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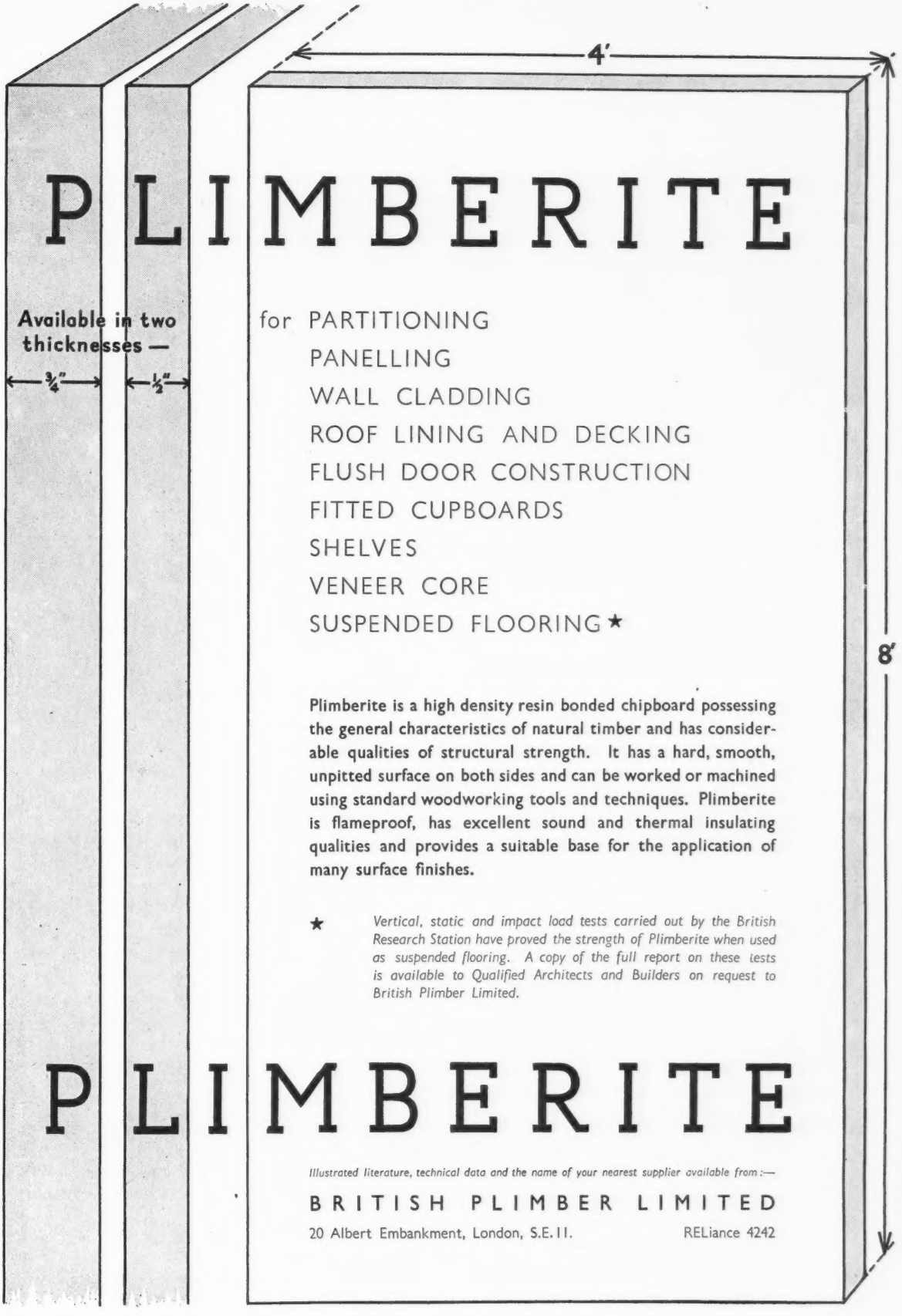

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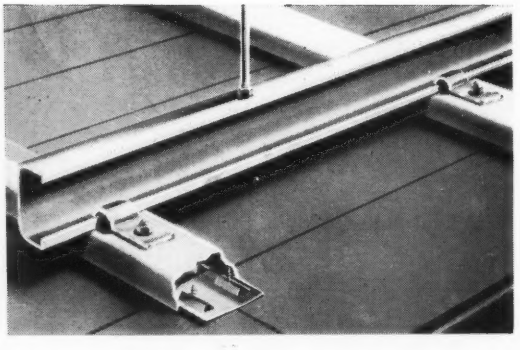

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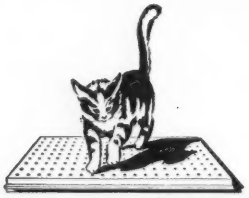

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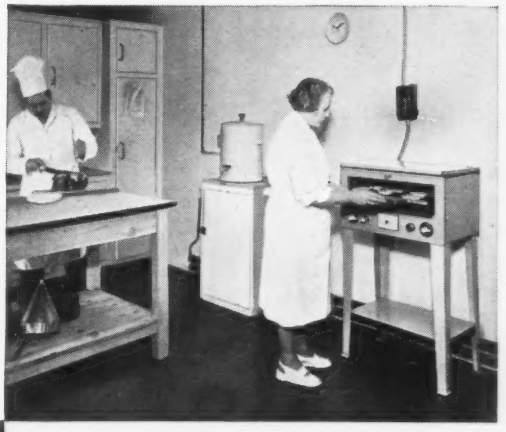

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This kitchen was designed and built in collaboration with the architects, Messrs. J. M. Wilson, H. C. Mason & Partners, 3, Chandos Street, Cavendish Square, London, W.1., and also with the suppliers, The Builders' Material Association Ltd., Granby House, 54/56, Stanhope Street, London, N.W.1.

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Above: Atlantic House, Holborn Viaduct, London, E.C.1.

Architects: T. P. Bennett & Son, FF.R.I.B.A.

Left: 77-91, New Oxford St., London, W.C.1.

Architects: Lewis Soloman & Son, F.R.I.B.A.

Below: Charles House, Kensington, W.14.

Architects: Major Arthur S. Ash, F.R.I.B.A.

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—so I said to him, ' Mr. Tomkins, you can't expect faultless typing in this light '. Then he sat down in my chair and squinted at my work and said, ' *I* can see all right ', and stamped back into his office. But he's an old dear really because when I went into his office half an hour later, there he was ringing up Crompton Parkinson about new lighting for the whole office. Now I must get on because I've a reputation to keep up. He hasn't spotted a mistake in three weeks".

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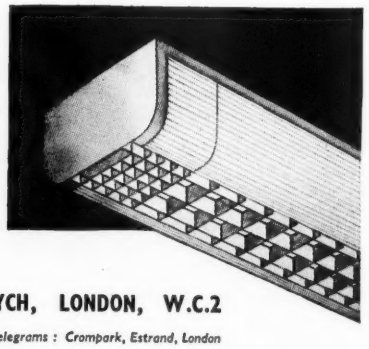

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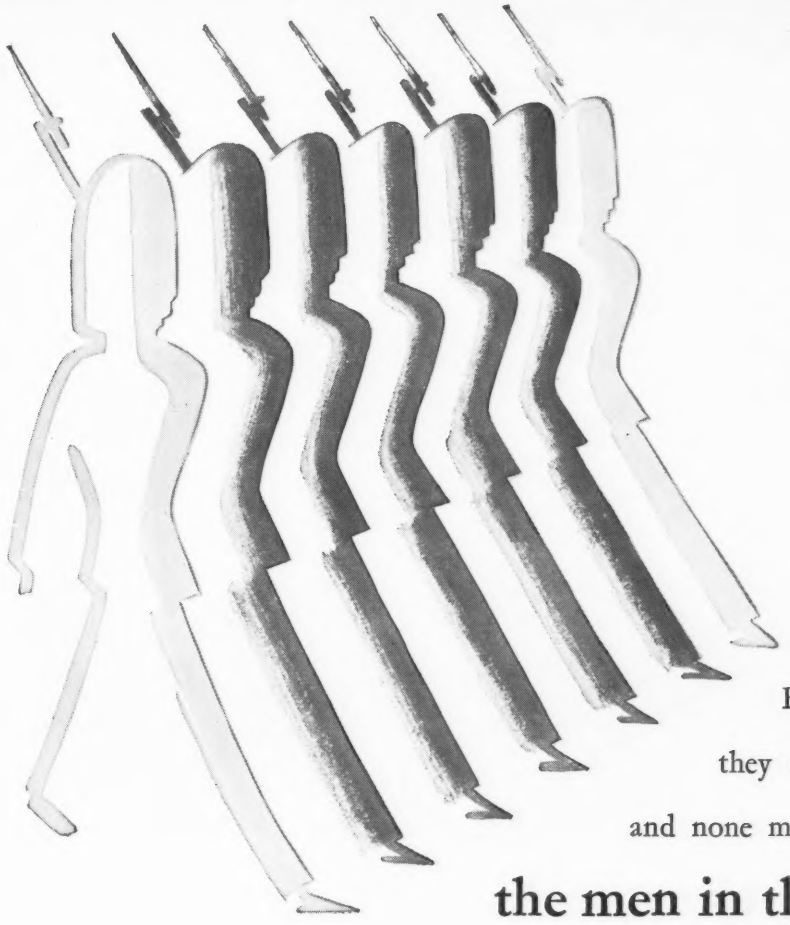

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they combine as one,
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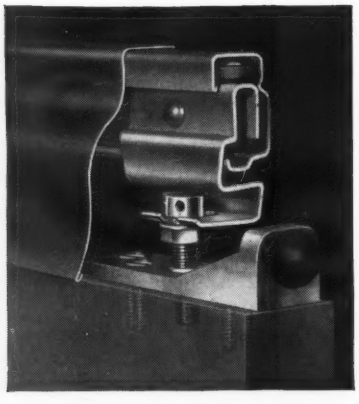

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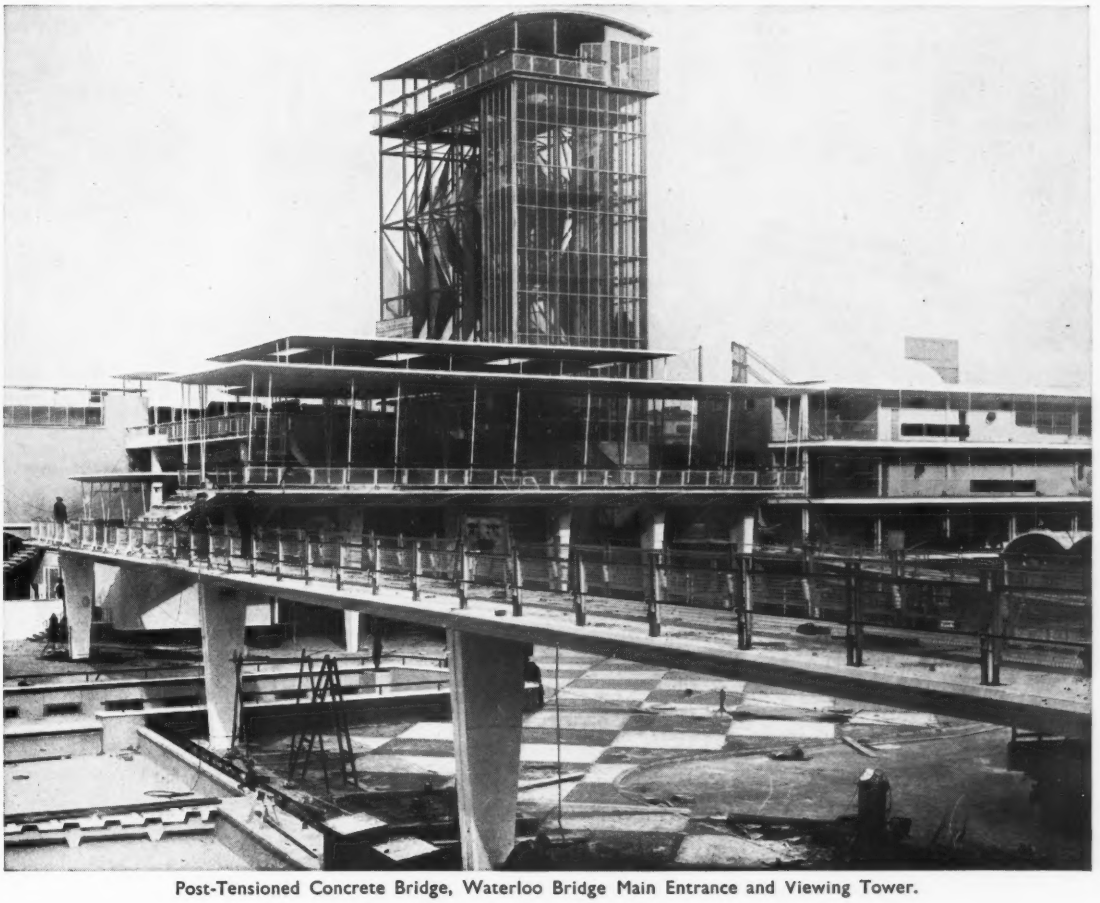

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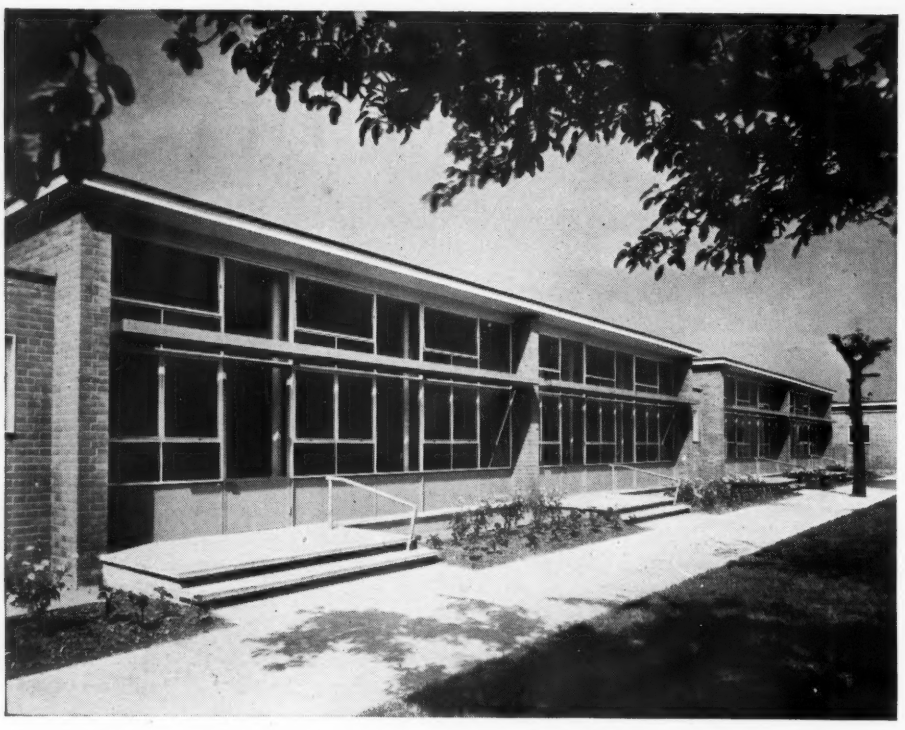

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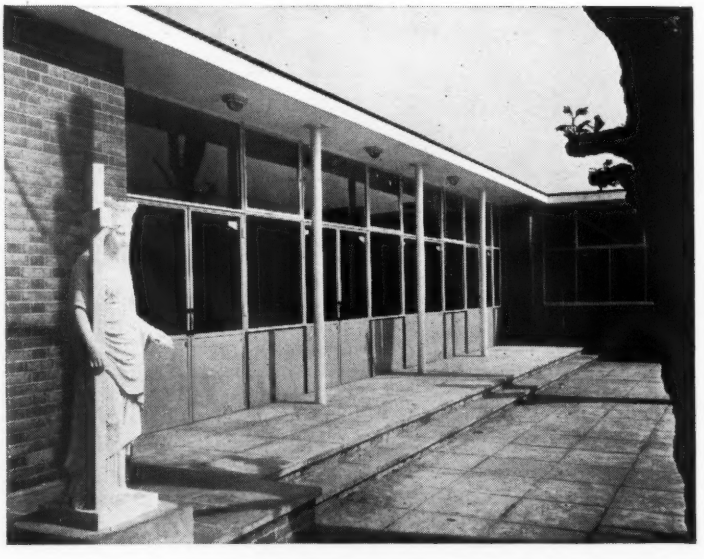

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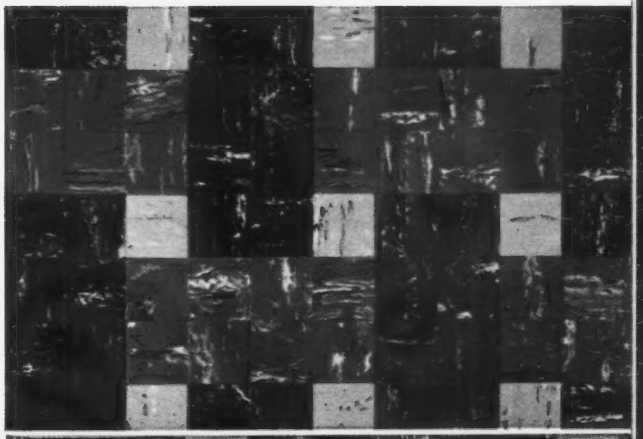

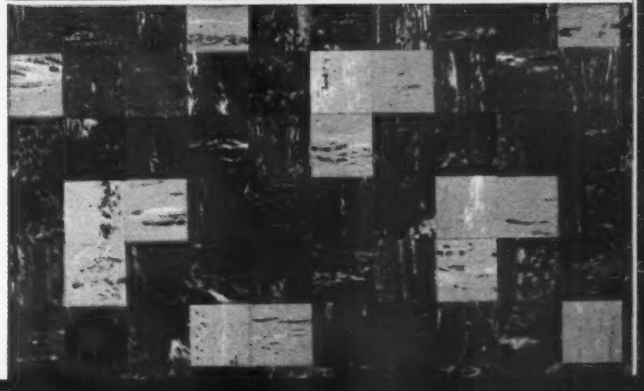

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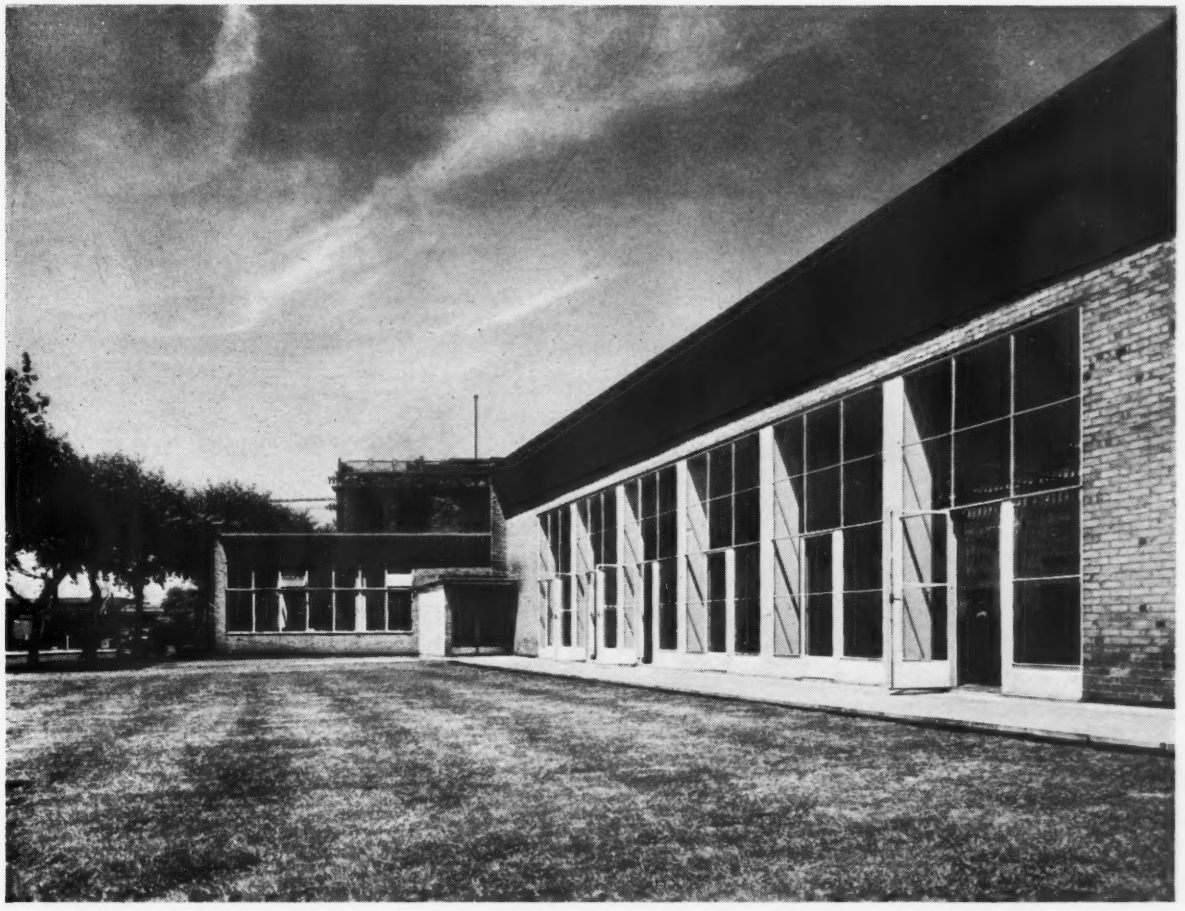

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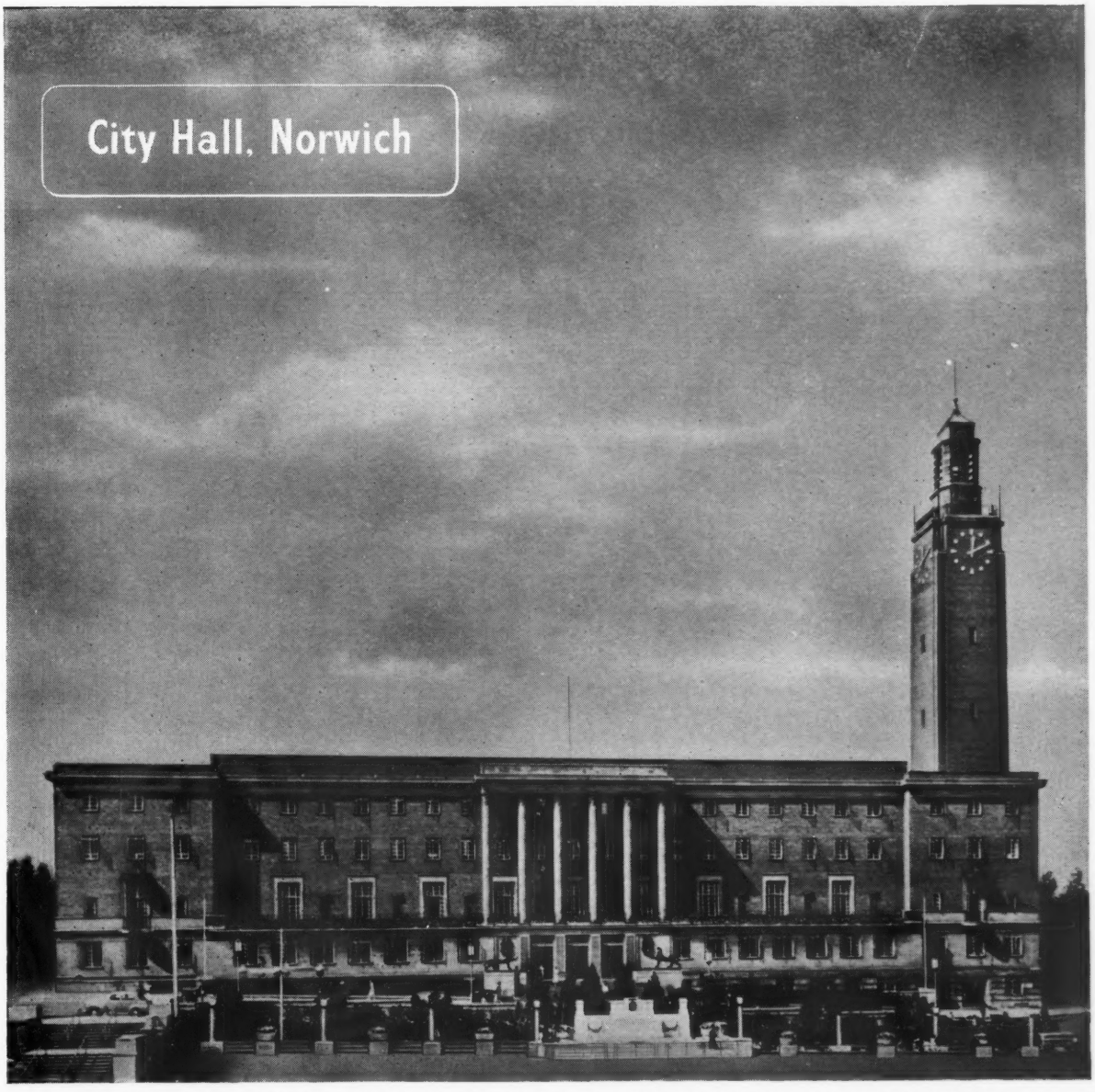

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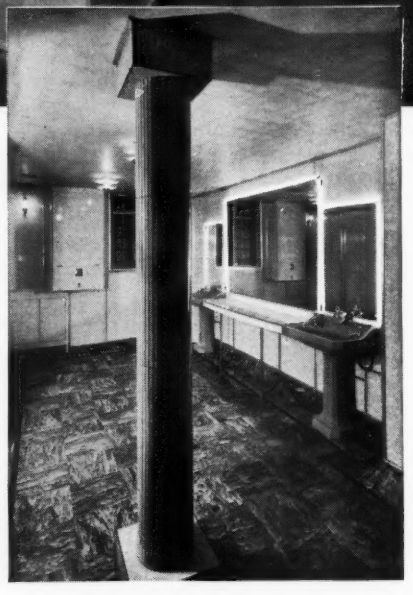

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THE ARCHITECTURAL REVIEW

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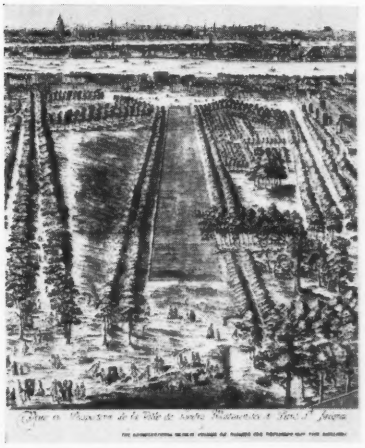

The Cover St. James's Park as we know it is the result of a transformation scene worked by John Nash in the third decade of the nineteenth century. Previously, the area was laid out in the formal French manner of the late seventeenth century; this section of Kip's view of London shows (probably with great accuracy) its appearance *circa* 1710. Although the principles which underlie Nash's masterpiece of Picturesque landscape are still both intelligible and valid today, the past few years have seen a number of inept alterations and additions in St. James's Park. Some of these are exposed, and suggestions are made for future treatment, in the pictorial feature following S. Lang's investigation of the history of the area which begins on page 293. The view above shows particularly clearly the smallness of the area within which Nash, employing eighteenth century principles of informal landscape design, managed to produce an effect of apparently limitless extent.

282 **Frontispiece**

283 **Monuments, Money—And Men? A Problem of Preservation** *by the Editors* By the Town and Country Planning Act of 1947, which requires the appropriate Minister to prepare lists of historic buildings which shall not be destroyed or altered without his consent, Britain is committed to a big programme of preserving her architectural past. It is a programme that poses many problems, financial and otherwise, which have received a certain amount of public airing. There is one, however, whose very existence is not widely enough recognized, although in the event it might well prove to be the problem on whose solution the success of the whole preservation programme depends: the number of architects qualified, by possession of the special historical and technical knowledge required, to advise on the maintenance, repair and restoration of ancient buildings is insufficient even for the present needs, let alone those greatly increased needs which will arise when the full impact of the new legislation makes itself felt. This urgent problem is discussed in the present article, and specific suggestions are made regarding the training of architects for the unspectacular but essential work of preservation and restoration.

287 **Airways Office in London** *Architects: James Cubitt and Partners*

293 **St. James's Park: The Rise and Threatened Decline of a Model Landscape** *by S. Lang* St. James's Park, the most beautiful of all the London parks, is essentially a creation of John Nash, who remodelled a canal-and-avenue scheme in the French manner which dated from the first years of the Restoration and with which the name of Andre Le Notre has been somewhat tenuously connected. In his improvements Nash followed the best Picturesque principles, and they are principles which are just as valid today as they were then. Unfortunately the authorities responsible for the maintenance of St. James's Park today apparently do not think so: during the past few years the Park has been defaced by a number of alterations and additions in the worst municipal taste. In this article S. Lang investigates the history of the area, while the illustrations following it show some of the mistakes that have been made and puts forward suggestions for future treatment.

306 **House near Sydney, Australia** *Architect: Harry Seidler*

309 **House near Melbourne, Australia** *Architect: Roy Grounds*

311 **Frank Furness: An American Pioneer** *by William Campbell* Frank Furness will be remembered by readers of *The Autobiography of an Idea* as the architect whose Philadelphia office Louis Sullivan, fresh from the Massachusetts Institute of Technology, entered in 1873, and as a character. He was also—as Sullivan indeed recognized—an architect of some originality and boldness, and his work deserves to be better known than it is. In this article William Campbell shows that Furness may be counted among the forerunners of the Modern Movement.

316 **Current Architecture**

319 **Popular Art Organized: The Manner and Methods of Raymond Loewy Associates** *by Alec Davis with an introduction by David Pleydell Bouverie* Raymond Loewy, French by birth with a Viennese father, went to the United States at the end of the first World War with the intention of studying engineering but became a fashion artist instead; in 1927 he restyled the Gestetner duplicator and so entered the field of industrial design in which his success has been so phenomenal that today Raymond Loewy Associates comprise five partners and about 250 employees, and as consultant designers to dozens of manufacturers on both sides of the Atlantic are responsible for the appearance of a vast range of goods, 'from lipsticks to locomotives.' Yet while the name of Loewy is sufficiently well known to everyone whose design education, as Alec Davis puts it, 'goes beyond the elementary or Teapot Spout stage,' the way in which a large design organization such as his works is to most people a mystery; nor in England is it easy to assess the results of the system in æsthetic terms. This article, with its accompanying illustrations, thus meets a double need; its title refers to Mr. Davis's conclusion that the industrial designers and commercial artists are the present-day equivalent of the popular artists of earlier ages.

Miscellany

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346 **Acknowledgments**

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THE ARCHITECTURAL REVIEW

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FIVE SHILLINGS

FOR THE RECORD *The South Bank Exhibition, the greatest architectural event of the post-war years, is now back history. Opposite is a farewell picture, taken from the air, showing its lay-out and buildings — both destined to have a big influence during the years to come.*

MONUMENTS, MONEY—AND MEN?

A PROBLEM OF PRESERVATION

Whatever its philosophical basis or historical implications, the belief that it is right and proper to preserve old buildings of æsthetic, historical or associational value is a constituent fact of the present age. Not only has it come to form part of the mental make-up of every educated Englishman: its power is such that even his governments have had to take cognizance of it—first in the Ancient Monuments Acts (of which those of 1913 and 1931 were the most important), more recently in the Town and Country Planning Act, 1947, and in the setting up of the committee under the chairmanship of Sir Ernest Gowers to consider the special case of houses of outstanding historic or architectural interest, in 1948.

Although the recommendations made by the Gowers committee were turned down by the Government,[1] it was not without a promise of new legislation designed to facilitate the preservation of the class of building with which the committee was concerned; at the time of writing the details of this proposed legislation are not known. Meanwhile, the Town and Country Planning Act is in operation. Under section 30 of this Act it is the duty of the Minister of Local Government and Planning to compile lists of buildings of special historic or architectural interest. Once listed, such buildings may not be destroyed or altered without the Minister's knowledge, and may, if he thinks fit, be made the subject of Building Preservation Orders. When it is realized that some seventeen thousand buildings have so far been listed, that the eventual grand total has been estimated at between 70,000 and 80,000, and that churches in use as such do not come within the scope of the Minister's powers and so are not included in these figures, it will be seen that the nation is faced with a preservation programme which can only be described as vast.[2]

[1] This article was in type before the date of the general election was announced, and had gone to press before the result was known. Therefore when 'the Government' is referred to, readers are asked to make mentally any correction necessary in the light of recent events. Of course the main argument is not affected in the least.

[2] The figure may be compared with those for France, where 12,500 buildings are classified as *Monuments Historiques*, while 15,000 are listed in a supplementary register corresponding to the English Grade III list; the French figures *include* churches.

But, if this programme, or any substantial part of it, is really to be carried out, it is clear that something more than preventive legislation will be required. Such legislation may stop buildings being pulled down; it does not help them to stand up. For that, two things are necessary—money and expert attention. Generally speaking, recent discussion of the problems of preservation has centred round the financial problem, which is kept constantly in the public eye by appeals for funds for the restoration of churches and cathedrals and by reports from time to time that yet another country house is in the market owing to its owner's inability to foot the ever-increasing bills for upkeep. Yet even if the financial problem were to be solved, there would remain the obstinate fact that the number of architects competent to undertake the repair and restoration of old buildings is altogether inadequate for present needs, let alone the immensely greater needs which will arise when the full effect of legislation existing and to come makes itself felt. And a building may be just as effectively destroyed as a work of art or a historic document by the wrong kind of repairs or restoration as by fire or pickaxe. This is a less conspicuous problem than the financial one, but it is no less serious. So far it has received little publicity, although the Gowers committee drew attention to it and the Georgian Group conference held at Leamington a year ago approved a resolution which urged, *inter alia*, 'that arrangements be made for the special training of architects and craftsmen in the treatment of old buildings.'[3]

The trouble is that normal architectural training and experience are not enough for work of this kind. Specialized knowledge is necessary, both of the building techniques of the past and of past styles. It would be wrong to blame the schools of architecture for not imparting this kind of knowledge as a matter of course: they are, or should be, trying to turn out creative artists, aware of the past certainly, but with their eyes on the present and the future. The construction of medieval vaults and the profiles of classical mouldings are subjects with which the modern creative architect need not much concern himself, but in which any architect who is to make the care of ancient buildings his business must be deeply learned.

At present the means of acquiring any such learning at all are extremely limited in this country. There have been, it is true, short courses in preservation and repair work, such as the week's course held by the Society for the Protection of Ancient Buildings in the spring of this year. The value of these must not be under-estimated, for they have been the means of giving a large number of busy men some acquaintance with the problems and techniques involved; but at the same time it must be recognized that specialists are not trained in a day, or even in a week. A more ambitious attempt to provide what is needed is the certificate course for qualified architects in preservation and restoration that was instituted last year by the Bartlett School of Architecture, University of London. This course lasts a year and, given the limitations inherent in any course designed for people who are already fully occupied during most of the hours of daylight, would appear to be a pretty thorough affair. In addition to English architectural history, the syllabus includes such subjects as the stability of vaults, structural decay, wind pressure on towers and spires, and the effects of bell vibration, while visits to buildings in the course of restoration form part of the study scheme. Every student has to submit a thesis on a special period of his choice and the examinations for the certificate take place in the first term of the session following the period of study, so as to allow him to carry out surveys and gain practical experience during the long vacation. All this is admirable, and the fact that no more than nine architects attended the course during its first year is disappointing—though not, when

[3] The Georgian Group has subsequently, the REVIEW understands, appointed a special sub-committee to study the subject.

one considers the conditions and demands of modern architectural practice, altogether surprising.

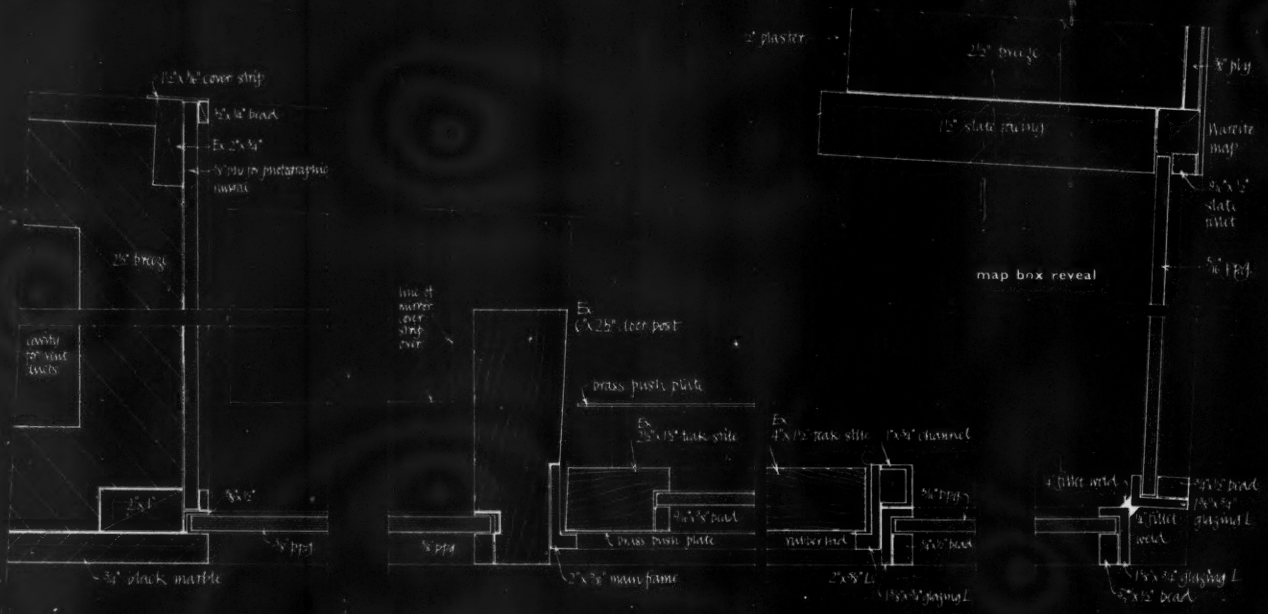
It seems clear to the REVIEW that what is wanted is not so much a special training for architects as the training of a special kind of architect. After all, we do not give our painters a course in picture cleaning and then set them to work in the National Gallery—and the care of the nation's historic buildings is just as specialized a job as the care of its pictures. When one thinks of the number of people today who take a far from superficial interest in those buildings and yet do not pretend to have any creative architectural ability, it is difficult to imagine that there would be much difficulty in finding recruits for this new branch of the profession. To judge by all the signs, a livelihood is assured them, either in private practice or in the architects' department of the Ancient Monuments Branch of the Ministry of Works—the staff of which must obviously be greatly increased sooner or later if the Government is in earnest in its announced intentions to increase the Minister's powers to aid in the preservation of historic buildings.[4]

On the Continent there are at least five schools of architecture which offer their ordinary students classes in preservation and restoration—Prague, Florence, Venice, Amsterdam, and the Stockholm Academy:[5] in Britain there is not one. In view of the urgency of the need, could not those British architectural schools which by situation, tradition, and the availability of suitably qualified teaching staff are best fitted to do so, institute special classes to be attended by those who wish to take up this work after they have passed their intermediate examinations—giving such students, that is to say, two years intensive preparation? And over and above that, could not the Royal Academy School of Architecture, which as a post-graduate school could skim off the cream from the classes in the other schools, devote itself to this most necessary task of training architects in the care of the monuments of the past? By its own account the Royal Academy is much concerned with tradition: it lies within its power to show that concern in a manner with which its worst enemy could not find fault.

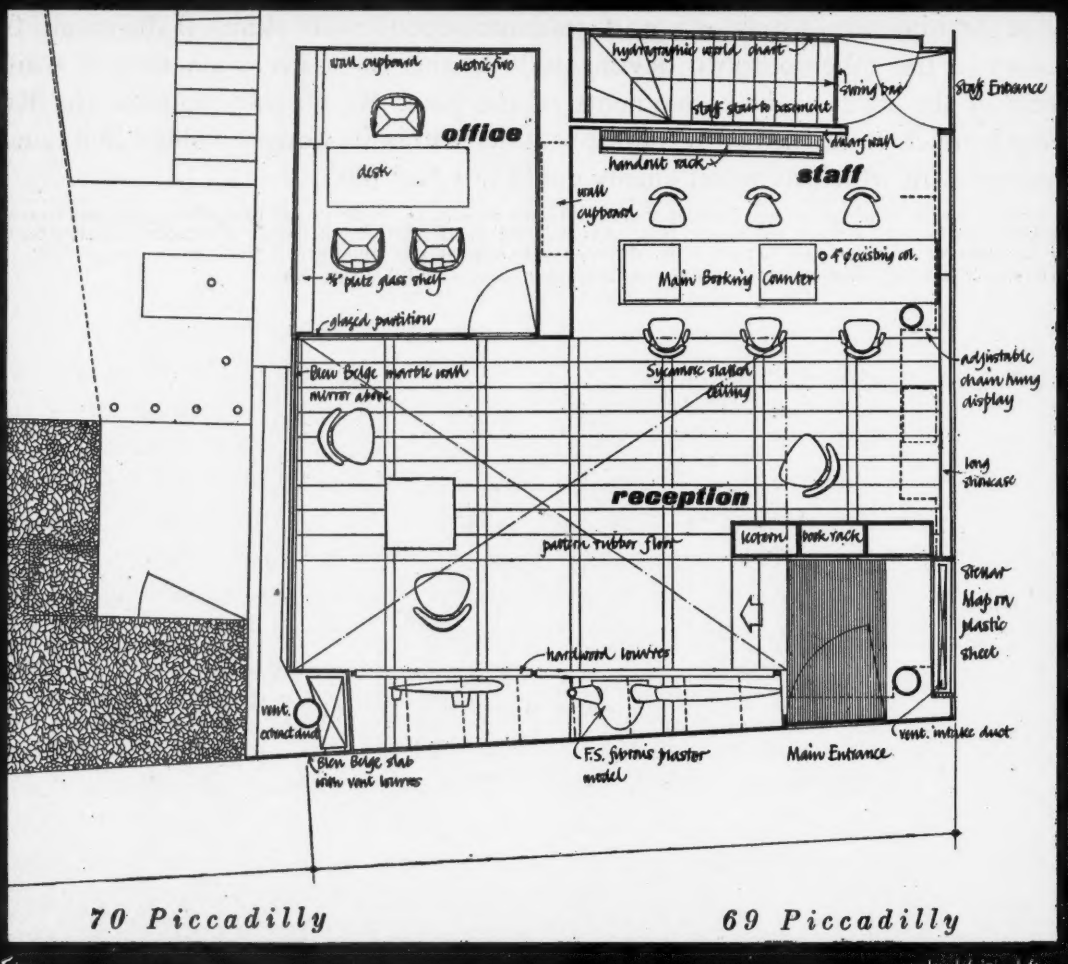
[4] Already, under Section 17 of the Ancient Monuments Act, 1913, the Minister of Works may, if he thinks fit, give upon request, free advice about the treatment of a national building (not being an ecclesiastical building for the time being used for ecclesiastical purposes) and undertake the supervision of repairs to it. In practice the Ministry tries to help everyone who asks.

[5] 'The Training of Architects: Interim Survey.' THE ARCHITECTURAL REVIEW, June 1950 (page 372).

AIRWAYS OFFICE IN LONDON



main window reveal | entrance door | details ¼ scale | Piccadilly—Dover Street junction



plan | scale: 1/6 in. = 1 ft.

S

1

70 Piccadilly *69 Piccadilly*

AIRWAYS OFFICE IN LONDON

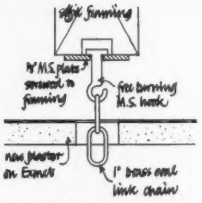
JAMES CUBITT AND PARTNERS: ARCHITECTS

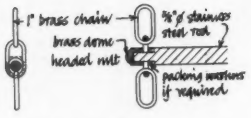
The architects were commissioned, as a result of their design for the South African Tourist Office at 70, Piccadilly,* to alter the next door building to provide offices for Qantas Empire Airways.

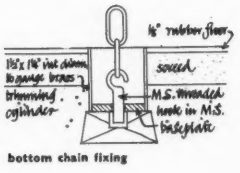
To create a feeling of spaciousness in this very small office it was decided from the beginning to introduce some form of screening to the windows facing Piccadilly and Dover Street. To alter radically the proportions of the interior, a hanging ceiling of sycamore slats (choice of material being dictated by the use of similar materials next door) was used to distribute light from cold cathode strip light placed above it. The sense of space was further increased by placing a mirror in a position where it would apparently prolong the ceiling. The Piccadilly window was eventually obscured by a louvred screen in front of which were placed models of the aircraft used by Qantas Empire Airways and a life-size plaster blade and boss of a Constellation propeller. The Dover Street window was obscured by a long showcase at eye-level

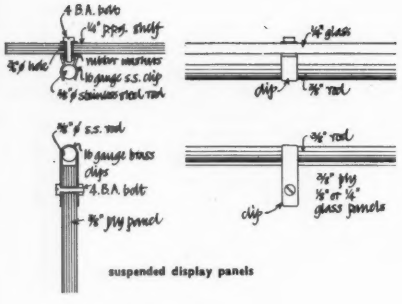
*See *Travel Office in Piccadilly*, AR, February, 1951.

details of display fittings









and by a changeable display of shelves, etc., simply suspended from chains.

Another consideration was the need to create a different axis from that of 70, Piccadilly which has a very small frontage to the street and considerable depth. The architects felt, partly because of the important view gained when walking from Piccadilly Circus towards the Berkeley Hotel and partly as a matter of design, that an axis at right-angles to that of No. 70 should be aimed at.

Preliminary sketches showed an entrance door in Dover Street, but the clients preferred the entrance door opening on to Piccadilly. The floor, therefore, was lowered so that the entrance would be at street level with three steps up to ground floor level. The existing stair down to the basement was reversed to become a service staircase only.

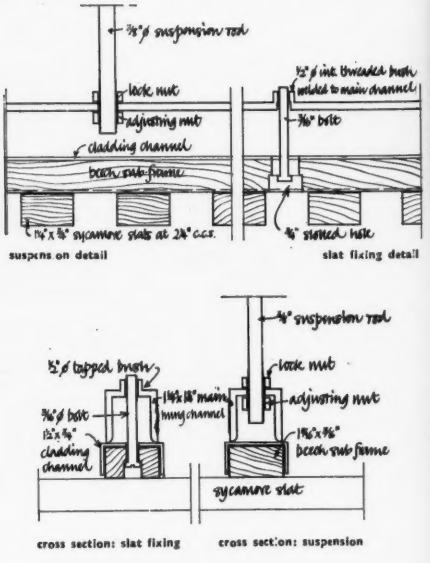
In order to carry through the principal points of the design of the travel office next door, it was essential to prolong the lines of the fascia lettering and this was done by using two different colours of terrazzo. The lettering used was the standard type face used by BOAC and Qantas for all their advertising.

One limitation on the design was the presence of an unsightly steel post supporting the corner of the build-

2

2. the Dover Street façade at night. 3. opposite, detail of the main Piccadilly window

details of slatted ceiling scale: 1/4 full size



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4. the staff area showing the counter at which the booking clerks and cashier sit. 5 is a detail of the counter. The thinner column is painted orange, the larger structural column white. The floor is white with thin stripes of blue, red and black. Chairs are grey with blue upholstery.

6, the waiting area in the main reception room. The wall is of Belge Bleu marble. 7, the manager's office.

ing which could not be removed. A large vertical panel was placed on the Dover Street front to disguise the column. This panel, constructed of two skins, contains the air intake duct to the basement and is faced externally with a specially designed star map of the Southern Hemisphere with the Southern Cross in the centre.

For the interior the clients required a large map of the world featuring Australia in the centre. This was obtained from the Admiralty Hydrographic Supplies Establishment. All fittings were specially designed, in particular two clocks, one showing London and the other Sydney time.

Accommodation has been provided for two booking clerks and one cashier at the counter and for a traffic superintendent in a small office off the main space. The only other requirement was for occasional seating around a low table where the booking clerks could discuss routes with clients in comfort.

7

S. Lang

St. James's Park, the loveliest of the London parks, is essentially a creation of John Nash. Before he got to work it was laid out in the French or Dutch style of the late seventeenth century and, as the print of 1821 opposite shows, afforded no exception to the rule that the English worked in that style without conviction. Nash, with the great heritage of eighteenth-century landscape theory and example to draw on, consulted the genius of the place to such good effect that although in fact the area is exceedingly small he was able to produce a sense of great spaciousness—and a landscape which enhances whatever is glimpsed across it and makes the extraordinary collection of happy accidents that forms the focal point in the lower illustration opposite into one of the most dramatically beautiful urban views in the world. The principles which Nash followed are not hard to deduce. What is more, they are just as valid today as they were in Nash's time. Unfortunately, however, the authorities responsible for the care of the park appear not to appreciate this truth, and the past few years have seen a number of extremely unhappy alterations and additions. The illustrated pages following Dr. Lang's article expose some of these and make suggestions for future treatment.

ST. JAMES'S PARK

THE RISE AND THREATENED DECLINE OF A MODEL LANDSCAPE

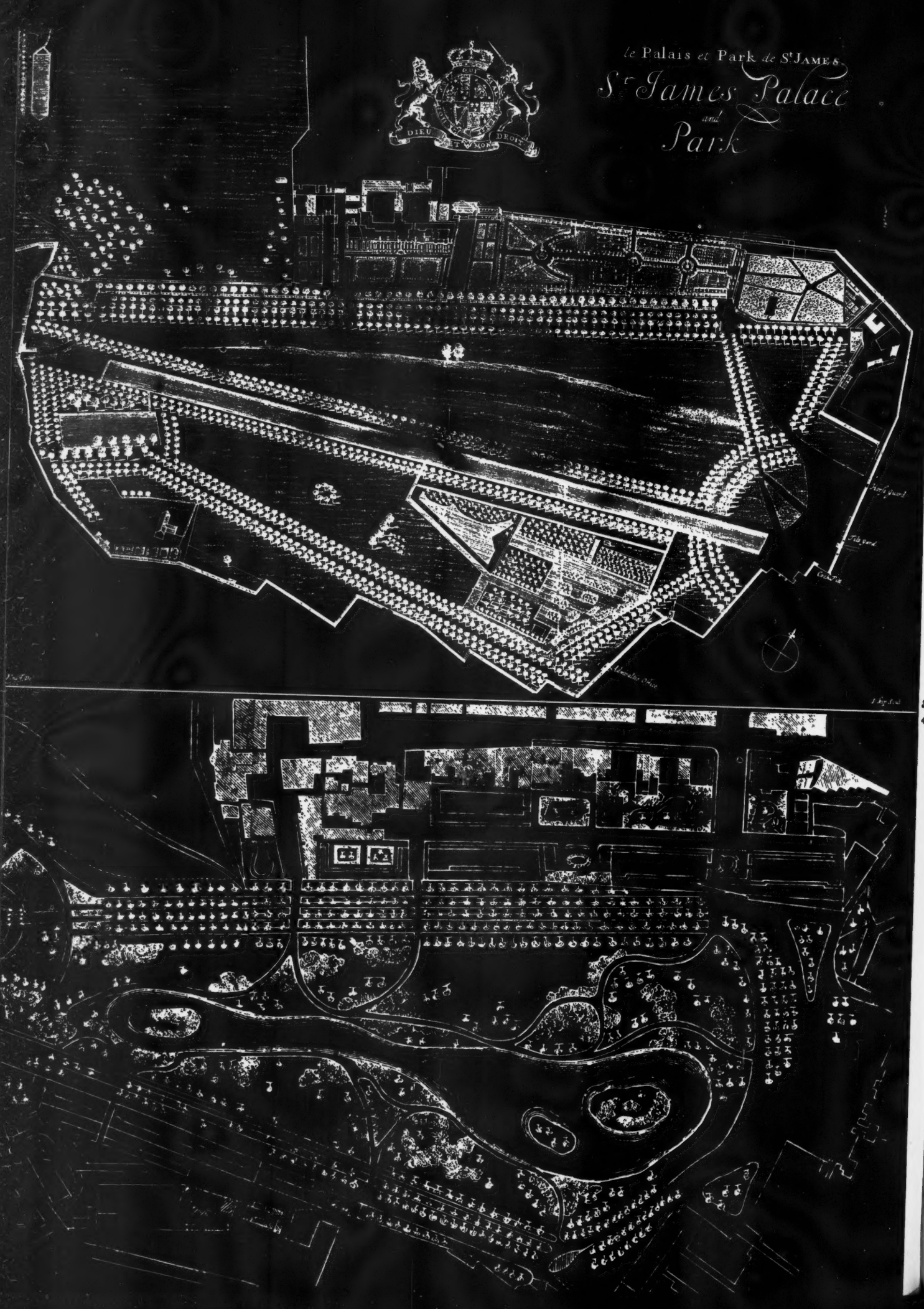
St. James's Park to-day is essentially the same as when it was laid out by John Nash in 1828. There exists a Treasury note of April 28, 1827, to the Commissioners of Woods saying:[1] '. . . that it appears to My Lords to be expedient that you should forthwith proceed to carry into effect the proposed alterations and improvements on the site of Carlton House and Gardens, as also on the south side of St. James's park and in the area of the Park, according to the plan, which accompanied your report, and their Lordships desire, that you will forthwith communicate with Mr. Nash for that purpose accordingly.'

Mr. Summerson asserts that before Nash took over the Park had been little more than 'a bare sumpy tract with a straight canal down the middle of it.'[2]

In medieval times the site was often flooded by the Thames, an arm of which came round Westminster Abbey until the twelfth century.[3] In the middle of it there was not even a 'straight canal,' but only a pool which was fed by a little brook until this became choked up in the thirteenth century and turned it all into a swamp. The first notice of it that we have is in the Domesday Survey, where it is recorded that the Manor, to which this piece of ground as well as that now constituting Hyde Park belonged,was in plough and pasture with 'villains' and peasants living on it.[4] In the middle was a leper hospital for 'eleven good sisters' placed by its founders under the patronage of St. James.[5]

When Henry VIII took up residence in Whitehall, wanting to enlarge his garden and finding the view of the leper hospital from his windows too distracting, he exchanged one of his manors for it with Eton College, which had custody of the hospital.[6] This was now demolished, the lepers turned out and a manor erected on the site—the later St. James's Palace. In 1537, Henry VIII acquired additional land from Westminster Abbey, enclosed the combined area, drained it and laid it out as a garden.[7] However, the new park cannot have been very grand. All one can see on Norden's map of 1593 are grassy fields with an avenue and an orchard and the large Rosamond's pond at the western end. Apparently the park was used for hunting and exercise as one can see

[1] PRO, Works 16-27/2 (7).
[2] John Summerson, John Nash, London, 1949, p. 244.
[3] Jacob Larwood, The London Parks, London, 1872, p. 61.
[4] Amherst, London Parks and Gardens, London, 1907.
[5] Larwood, op. cit., p. 62.
[6] Larwood, op. cit., p. 64.
[7] E. Sheppard, Memorials of St. James's Palace, London, 1894, Vol. I, p. 15.


le Palais et Park de St JAMES
St James Palace
and
Park
DIEU ET MON DROIT

5

The upper engraving opposite by Kip, after a drawing by Knyff of c. 1710-15, represents the state of the park after it was remodelled—as rumour will have it, though without evidence, by the Great Le Notre—early in the Restoration, in the stiff manner of French or more likely Dutch Baroque gardening of the seventeenth century, with a 'water' down the middle and fine avenues along either side of the roughly triangular ground. St. James's Palace was bypassed, as it were, and the water centred on the then non-existent Buckingham Palace. Next to St. James's Palace the 'Physic Garden' can be seen, in the south-east corner the 'Decoy' which used to be inhabited by many species of fowl, and at the west end Rosamond's Pond of many romantic associations—seen above in an engraving made in 1799 (more than a quarter of a century after it had been filled in) from an earlier painting of Hogarth. The plan opposite below, the 'Intended Improvements in the Parks' as suggested by John Nash to the Commissioners of Works and presenting St. James's Park more or less as we know it today, shows the extreme skill of the architect in arranging a site to its best advantage; the way he succeeded in squeezing into the small area the existing avenues of Mall and Birdcage Walk, a perfect example of English landscape garden in the best Repton manner, is wholly admirable. The straight canal was transformed into a fine winding lake, with islands supplanting the old 'Decoy' as a home of wildfowl, and the grounds were planted with a variety of trees which form innumerable charming vistas. The plan is reproduced upside down to present the same orientation as the Kip engraving above.

from a letter of Lord Bagot to his father in 1598:[8] 'My Lord upon Thursday night last with one Reynalls, a gentleman of his chamber, and another that kept his hunting horses, between 5 and 6 o'clock took horse in St. James's Park.'

James I did something to improve the park; he provided the pond with an extra water supply. However, his main interest was in the menagerie, which included two crocodiles[9] and to which the King of Spain, knowing of his hobby, contributed camels, elephants and other rare beasts.[10]

Neither at this time,[11] nor later on under Cromwell, was the park open to the public; only adjoining residents, of which Milton was one, were admitted.[12] Curiously enough, Cromwell did not sell the park. He even restocked the deer, and it seems to have continued as a fashionable parade for his court as it had been for that of Charles I.

Charles II must, immediately after the Restoration, have given his attention to the improvement of the park, inspired, perhaps, by what he had seen when exiled in France. Also, he seems to have opened the park to the public after his return, for already on September 11, 1660, Pepys notes in his diary that he had been to see 'how far they had proceeded in the Pell-Mell and in making a river through the Park which I had never seen before since it was begun.' And, again, exactly a month later he 'observed in the park the several engines at work to draw up water with which sight I was very much pleased.' On December 1, 1662, Evelyn records that people were skating on the canal. There can be little doubt that the canal, which was to remain the chief feature of St. James's Park until Nash reshaped it, was begun in 1660. Pepys 'Pell Mell' which must be to-day's Mall, must have been begun at the same time. (To-day's Pall Mall, where the game was first played and referred to by Pepys on August 19, 1662, as the 'old' Pall Mall, was outside the park then, as it is now.) There is a consistent rumour that Le Notre was somehow connected with the improvements of the park. The first time we hear about it is in Muralt's *Letters about England*;[13] though they were not published until 1726, we know that Muralt was in England in 1694,[14] and his observations must date from this moment. What he has to say is so interesting that it is worth quoting in full:[15]

> 'The Park is a large Extent of Ground with Trees all round, which are very agreeable. There's a Canal in the middle edg'd with Trees, where one may see the Ducks swimming; the rest is meadow and Pasture for Deer and Cows. Its great Beauty consists in (as it were) the Country coming in to the City. I am inform'd King Charles II intended to have added more Ornaments to it and that he had sent for a skilful Person from Paris for that Purpose the same that designed the Scheme for adorning the Tuileries. After he had taken a narrow View of the Place, he found that its native Beauty, Country Air and Deserts, had something greater in them, than anything he could contrive and persuaded the King to let it alone. So the Park remains in the same state that is a fine Country-like Place and is the more agreeable in my opinion because it has neither Art nor Regularity.'

Apart from curious sentiments expressed about the irregularity and picturesqueness of the park, remarkably early for that time (one wonders whether one can possibly assume an influence of Sir William Temple of Sharawaggi fame who was one of Muralt's connections during his stay in England),[16] this statement was made at a time near enough to Le Notre's supposed sojourn in this country to seem reliable as a source. However, as an utterance of Le Notre's it would be even more peculiar than as one of Muralt's. Of course, the actual name of Le Notre is not mentioned. Is it possible that not he was meant, but some other French gardener who had been connected with the Tuileries and then came to England? As Mrs. Amherst has pointed out,[17] there is only one contemporary indication that the Great Le Notre was ever in this country, namely, a warrant permitting him to take horses out duty free. But even this is no definite proof he was actually here. Can it really be possible that none of the contemporary diarists should have mentioned such an event, that in none of the many documents calendered in the State Paper Collections, or printed in the Historical Manuscript Commissions publications, his stay should have been recorded?[18] Nor does Monsieur Sorbière, who visited England in 1633 and described the Park, the Mall and the Canal, make any mention of this celebrated compatriot.[19] Only Vertue records much later that the Mall in the Park was made by Le Notre.[20] His wording actually implies that the Mall was laid out later than would seem to have been the case from Pepys's reference. Vertue's entry is most confused and he appears to be purposely vague, possibly because, though wishing to introduce Le Notre, he sensed a certain discrepancy of time between the actual event and the gardener's supposed visit. This is the passage in his notebook:

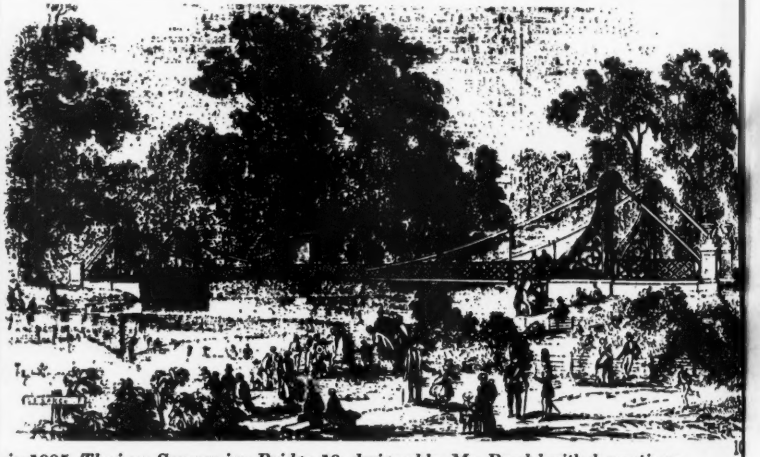
> 'a patant to James Dupuis of the Pell Mell—pd 4s 6 this appears to be in 1661—then pall mall—was so called long before, or several years before, the Mall in the park was made or laid out by Mons. Le Notre.'

There was certainly talk of Le Notre coming to England,

[8] Hist. MSS. Comm. 4th Report, p. 338.
[9] Larwood, op. cit., p. 70.
[10] ibid.
[11] ibid.
[12] ibid.
[13] B. L. de Muralt, Lettres sur les Anglois et les Francois et sur les Voyages, Cologne, 1728, ed. by Charles Gould, Paris, 1933. English translation: Letters describing the Character and Customs of the English and French Nations, London, 1726, p. 77.
[14] Muralt, ed. Gould, op. cit., p. 11.
[15] Muralt Letters, op. cit., p. 77.
[16] Muralt, ed. Gould, op. cit., p. 11, Letters, p. 86 ff.
[17] Amherst, A History of Gardening in England, 3rd enlarged ed., London, 1910, p. 179.
[18] ibid.
[19] Samuel Sorbière, A Voyage to England, London, 1709, p. 17.
[20] Vertue Notebooks V, p. 88. Walpole Society, 1837-38, Vol. XXVI.

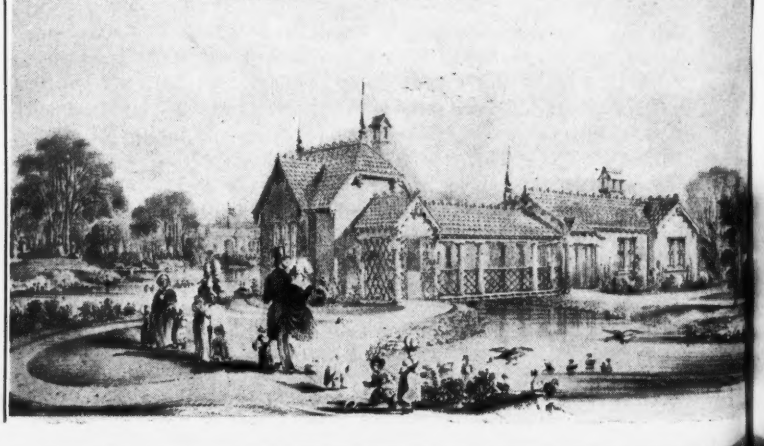
7 *In this mid-nineteenth century view looking across the lake towards Buckingham Palace,* 7, *Nash's intentions in remodelling the Park and creating a picturesque landscape can be fully appreciated. The Palace is framed and partly hidden by clumps of trees, the lake with its curving shore has an island to add to the romantic atmosphere, and a path along the waterside and wide expanses of lawn with informal planting give the sense of country for which the town-dweller longs.*

8 *In* 8, *an engraving of* 1837 *showing the view across the lake from its western shore to the Horseguards, the mood and atmosphere of the Park are again well invoked.* 9, *the 'Milk Fair' near the eastern end of the Park, where milk from the cows kept in the Park was sold on the spot, a seventeenth century tradition which only ended*



in 1905. *The iron Suspension Bridge,* 10, *designed by Mr. Rendel with decorations by Matthew Digby Wyatt. Although only erected in* 1857 *during 'Metropolitan Improvements,' it still fits perfectly into the Nash setting, as do also the cottages,* 11, *erected in* 1841 *(still preserved) for the Ornithological Society by J. B. Watson.*

9



for in 1662, Charles II asked, through M. Batailler, the French King's permission for it.[21] Permission was duly granted[22] and it was arranged for Le Notre to travel with Lord St. Albans, but still there is no definite evidence that the journey took place. A letter written by Charles II to his sister, the Duchess of Orleans, is equally inconclusive:[23] 'Pray lett Le Nostre goe on with the modell, and only tell him this addition that I can bring water to the top of the hill, so that he may add much to the beauty of the decente by a cascade of watter.' Did Le Notre know Greenwich, to which this passage probably refers, from description only, or had he been there to see it? We do not know.[24]

Charles II also purchased some more fields as we hear from a News-letter of May 21 of 1667:[25] 'His Majesty has given order for taking in several adjacent fields into his park of St. James, Viz. from the Lord Chancellor's new house all along Knightsbridge highway round the Physic Garden so as to come in at Whitehall behind Goring house.' This part was walled in by a brick wall[26] and was possibly added to the park to offset encroachment by building which had begun in the north-eastern corner.

Connected with the park were apparently several places where one could eat and drink. The least known of these is a so-called Vineyard or the Royal Vineyard which was situated near Rosamond's Pond. Although it is already mentioned in James I's time, the first record of there being refreshments served and arbours available for visitors dates from 1732.[27] Another such place were the Mulberry Gardens (roughly on the site of Buckingham Palace), which had been fenced off from St. James's Park by James I in an attempt to establish a silk industry.[28] When that project failed, the gardens were laid out as a place of amusement and of refreshment, possibly some time during the Protectorate.[29] They seem again to have been closed down at the end of the 'seventies of the seventeenth century.[30]

The best known, however, were the Spring Gardens. They had a long and varied history, and are recorded as having served meals in Charles I's reign above the official maximum price. On several occasions they were closed down owing to rowdiness, but always re-opened again until they finally shut their gates soon after the Restoration.[31] By that time, also, building had encroached on them considerably, and a map of 1683 shows only a small part left at the back of where the Admiralty is now.

Near the Spring Gardens, but inside the park, there was a place of refreshment entirely in keeping with the rural aspect of the park. We have a report of it from the pen of Grosley in his *Tour of London*: 'Agreeably, to this rural simplicity most of these cows are driven about noon and evening to the gate which leads from the park to the quarter of Whitehall, tied to the posts at the extremity of the grass plots, they swill passengers with their milk, which, being drawn from the udders upon the spot, is served with all cleanliness peculiar to the English in little mugs at the rate of a penny a mug.[32] Whether this milk fair goes back to Lady Cromwell's days, who is said to have had cows in the park, is impossible to say. But at the very end of the seventeenth century it existed already[33] and it survived right through the nineteenth century, being given official sanction in 1824, which was only withdrawn in 1905.[34] From then on until 1922 the late occupiers were granted the use of the kiosk at the entrance of the park. In 1923, the kiosk was demolished and thus this old tradition ended.[35]

During the whole of the eighteenth century only very minor changes were made. Some time between 1714 and 1721 the old Decoy near the south-east of the canal with its many narrow channels and inlets was made into an ordinary pond,[36] though the so-called Dutch Island on which William had a little summer house built, still survived.[37] The island only ceased to be an island in 1770 in the course of some improvements which were begun in 1746 when the moat round it was filled in.[38] At the same time Rosamond's Pond was filled in, the canal cleaned and parts of the grounds were levelled.[39] Towards the end of the century the park began to lose its popularity as a rendezvous of elegance and fashion.[40] It also began to look somewhat dilapidated.

At the time of the Peace Celebration in 1814, however, it regained much of its former glory and must, on the night of the fireworks, even have surpassed it. John Nash had been entrusted with the designs of the decorations, which included a Chinese bridge, that remained until 1827, and a pagoda.[41] Finally, in 1828, Nash was entrusted with the replanning of the park as part of the whole Regent Street and Regents Park scheme. The water was being dug in 1828,[42] and it seems that in 1835 the whole thing was finished,[43] for a passage in *The Landscape Gardener* by J. Dennis, published in that year, runs like that: 'The best obliterations of avenues that has been effected . . . but it has involved a tremendous destruction of fine elms. Certainly considerable credit redounds to the projector of these improvements for astounding ingenuity in converting the Dutch canal into a tiny flowing river with incurvated banks terminated at one end by planted island and at the other by a peninsula.'[44]

There was a small alteration made in 1850 opposite Buckingham Palace when sixteen timber trees and several smaller plants were removed,[45] but otherwise the park to-day is in its main outlines as Nash left it. Only the communications were improved, and in the course of these improvements a

[21] Jules Guiffrey, Andre Le Nostre, Paris, 1912, p. 699.

[22] ibid.

[23] The Queens House, Greenwich, 14th Monograph of the London Surrey Committee by George H. Chettle, London, 1937, p. 42. I am greatly indebted to Mr. Chettle for having drawn my attention to this letter.

[24] M. L. Gothein, in A History of Garden Art, London, 1928, Vol. II, p. 120, suggested that the relation of the Canal in St. James's Park to the Palace points to Dutch influence rather than to French. Inconclusive references to French gardeners can be found in CSPD, Charles II, 1661-62, Sept. 27, 1661, CSPD, Charles II, 1661-62, Dec. 10, 1661 and CSPD, Charles II, 1661-62, June, 1661. Better than about the park, we are informed, about the Garden at St. James's altogether. In May, 1660, Dr. Morrison was appointed 'to the office of Botanical Physician and Chief Herbalist to the King, with the physical Garden in St. James's Fields for medicinal plants. Also overseer, director and gardener of Hampton Court and the Privy Gardens at St. James's' (CSPD, Charles II, 1660-61, May, 1660). Then we know of the already mentioned Andre Mollet who actually added a plate with the view of it to the English addition of his *Le Jardin de Plaisir* (Amherst, *History*, p. 184), and later of Verrio the Italian painter who became, as again Vertue assures us, principal gardener and surveyor to His Majesty's work (Vertue Notebooks, Vol. II, p. 132); probably in that quality he inhabits a house at St. James's whose garden—which must be the Privy Gardens—as Evelyn assures us when he dined with him in 1686, 'he had made a very delicious paradise' (Aug. 4, 1686). And Strype when revising in 1720 Stowe's *London* observed that the garden with curious walks and excellent fruit in it had lately been much improved by George London (Vol. II, Book VI, p. 77).

[25] Wren Society, Vol. VII.

[26] Strype-Stowe, Vol. II, Book VI, p. 77.

[27] Larwood, op. cit., p. 175.

[28] Amherst, London Parks, p. 58.

[29] ibid.

[30] Larwood, op. cit.

[31] ibid.

[32] M. Grosley, A Tour of London, London, 1772, Vol. I, p. 80.

[33] Larwood, op. cit., p. 218.

[34] PRO, Works 16-27/10, 1824-1923.

[35] ibid.

[36] PRO, Works 3/2.

[37] Larwood, op. cit., p. 123.

[38] Larwood, op. cit., p. 213.

[39] ibid.

[40] Larwood, op. cit., p. 249.

[41] Sheppard, op. cit., p. 30.

[42] PRO, Works 16-27/2 (7). Extracts from this document are printed in an appendix on p. 298.

[43] From the minutes of a 'Report from the Select Committee on the State of the Public Buildings in the Department of the Office of Works' (Report from Committees, 1828, IV, 315), see the appendix on p. 298. A good deal of information regarding the 'building' history of St. James's Park can be found in this Report.

[44] J. Dennis, The Landscape Gardener, London, 1835, p. 41.

[45] PRO, Works 16-27/4 (1-2), 1850.

new suspension bridge was erected across the ornamental water about which *The Times* reported, as follows, on October 29, 1857: 'On Sunday last the iron suspension bridge across the basin in the enclosure of St. James's Park was opened to the public. It is situated in a line between Queen's Square and the Courtyard leading to Marlborough House and the new gravel pathway has been laid down between the Terminals of the bridge on the South side and Queen's Square Gate. Several new footpaths have been formed and some old ones have been removed, which alterations have improved the appearance of the enclosure.' The bridge had been designed by Mr. Rendell and the decoration of it by Sir Matthew Digby Wyatt.[46]

[46] Sheppard, op. cit., p. 32.

Extracts from documents in the Public Record Office relating to the landscaping of St. James's Park

Report from the Select Committee on the State of the Public Buildings in the Department of the Office of Works (*Report from Committees*, 1828, IV, 315)

Mr. Nash cross-examined.

Q. Is it usual for layers out of the grounds or the landscape gardeners as they are called to make any charge for the boundaries, such as 5 per cent?
A. They never do it, they merely give designs.
Q. So that you charge the architect's commission upon work which properly belongs to the landscape gardeners?
A. I do not think a landscape gardener could have done it.
Q. Does the landscape gardener make contracts and superintend the execution of the work?
A. I have a notion he is paid by the day; Repton used to be paid by the day and for his drawings, but he never executed the work, and, of course, could not charge commission.
Q. Does this charge for laying out the ground include the planting?
A. It does not include the shrubs; those I could not make an estimate of; it includes the forming all the grounds for plantation, but not shrubs.
Q. Is the commission to be taken upon the gross cost of the shrubs?
A. Upon the total expenditure.
Q. Who gives orders for the shrubs?
A. There is a gardener appointed, and he gives in a list of the shrubs; that list is submitted to the Office of Woods; I give my opinion as to whether they are such shrubs as I intend to form the landscape with, or not; then the Office of Woods gives directions for the purchase of those shrubs, and there is a person appointed to see them put in.
Q. Did you not consult Mr. Hayter, the Kew gardener, as to the evergreens which would live and vegetate well in the neighbourhood of London?
A. Yes, with respect to Buckingham House gardens.
Q. You have applied the same principle to the area in St. James's as to the gardens at Buckingham House?
A. Yes; and in addition to that I sent up for my own gardener, and made him superintend the planting and to discriminate between the trees, and to see that they should be placed properly.
Q. Are you aware of the expense of the trees or shrubs that have been furnished?
A. I cannot form the least idea.
Q. To whom is the account of the expense rendered?
A. To the Office of Woods.
Q. The whole of this work is done under the direction of the Office of Woods?
A. Yes.
Q. You have taken in a considerable portion of ground on the South side of this new garden in St. James's Park, out of Birdcage Walk, have you not?
A. Yes, all the trees are taken in within the railing, except that part which is requisite to form the road.
Q. What is the purpose of doing that?
A. It is intended that the whole of the interior of the Park should be thrown open to the Public. In one respect I think the apparent magnitude of the park will be increased by taking those trees in, and they are better protected within the railings than without.
Q. Is not the road that we have now carried along the Birdcage Walk, carried on such a level as must of necessity destroy all the trees on the South side of it?
A. I think not all of them.
Q. Must not a great number of them be taken down at the end towards the spot where the soldiers exercise?
A. I cannot recollect how many.
Q. Why was the old level of the Birdcage Walk altered?
A. There is a variety of reasons why it was altered; it was considered that a level road was better than going up and down hill. This road is to be used by the public at large; therefore, as you would lower any other hill, it seemed to be better, and it is necessary, for the houses along the line of it, to have it parallel with the buildings.
Q. Was any public authority consulted upon that subject?
A. This is a part of the general plan, and was with the estimates submitted (I believe) to the Treasury, and the Treasury have directed the execution of it.
Q. Does the general plan at all describe the change of level?
A. No, but the accompanying working drawings do; the whole Park has been levelled, and among other drawings, there is a section of the whole line, which shows the level of the road.
Q. The outside of the centre of St. James's Park being laid out in straight lines, would it not have been better taste to keep the inside in straight lines, for terraces?
A. When these plans were under contemplation, it was considered whether it should have been symmetrical, that the water should have been made as a formal canal, enclosed by a wall and a balustrade with vases on the piers, such as is found in gardens. When that was about to be estimated, for the purpose of deciding which it was to be, the estimate, instead of its being 9,000*l* or 10,000*l*, it would have come to 50,000*l* on account of the foundations, the great part of which was bog.
Q. As to the centre of the Park, it appears on the Treasury Minute that the clumps of trees are to be fenced round; is that intended to be done?
A. Yes; it is intended with a very light fence to surround the clumps, but round the exterior of them there will be standard trees, to conceal the fences.
Q. From your designs for the ornamental work, are the Committee to understand that you expect a better class of person will be induced to visit the park?
A. I should think so.
Q. Do you not consider it will be a great advantage to that class of persons to have a better access to the park than that which Spring Gardens afford?
A. Nobody can doubt it.
Q. How soon is it intended to open the proposed Garden in the centre of the Park to the Public?
A. The Park is now finished as far as I have to do with it, except as to a very slight iron railing to be placed round the clump of trees, to protect the trees generally; except some of the outside which will be sacrificed. It does not rest with me, but I presume it will be advisable to let this winter go through in order to allow the trees an opportunity of growth, and to open it the following summer. (June 12, 1828).

It is known to the Committee through the evidence of Mr. Arbuthnot and of Mr. Nash that the present improvements in Saint James's Park will according to Mr. Nash's estimate (he having the superintendence and management of all that is there going on) cost £19,253, of which about £10,000 has been already paid. Nov. 14, 1828.

Works 16-27/2
12, in 1823 enquiries made as to the state of St. James's and Hyde Parks.
10v, the keepers were allowed to keep cows to supplement their meagre and insufficient salary.

9, Herewith I transmit you the Specification and Estimate of the Ornamental Water and all the works relating to the ground work roads and plantations, and except the plants—agreeably to our arrangement I have set Mr. McIntosh to work . . . [*Letter of Nash to A. Milne*, 23.7.1827].

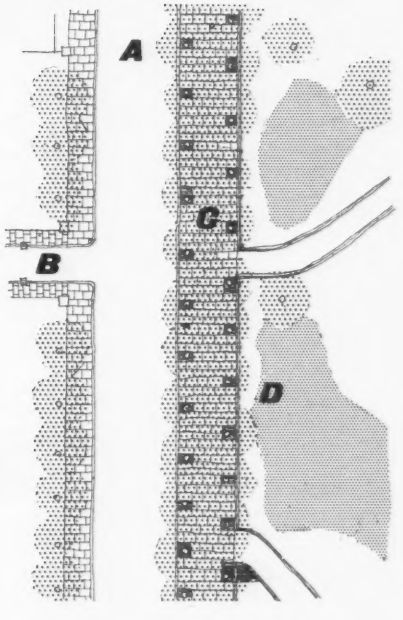
10, Specification of the Improvements proposed to be made in Saint James's Park according to the Plan of the 31 May 1827.
The size and form of the Ornamental Water as well as the Plantations and Islands, and Spaces for Dress Gardens, Waterloo Place, and Carlton Street are all to be laid out according to the Plan, Section and different Drawings to be given.
The Depth of the Ornamental Water is to be six feet . . . The Slopes round the Islands as well as round the Ornamental Water are to be found at two and a half horizontal to one perpendicular; or a larger slope where necessary round the made up ground in the Islands. . . .
The Plantations to be raised two or three feet and the Islands are to be raised to a height of between 2 and 3 feet above the level of top water according to the Section given.
The whole of the parts raised for plantation and the whole of the Islands are to be covered with the vegetable soil reserved for this purpose after being properly levelled.
The Malls upon the North side of Saint James's Park are to be altered by raising and widening the principal Mall and lowering that upon the North side of it as shown upon the Cross Sections and Plan as far as the Trees will admit of it, and the other Malls are to be formed agreeably to them likewise. . . .
The Islands and Plantations to be made fit for planting in October and the whole of the works to be completed on or before 25th Day of December 1827.

13, I will agree to excavate and form the ornamental Water in St. James's Park, to raise the Islands and Plantations also to raise Waterloo Place and the space round the intended Fountains, as also Carlton Street and the three Gardens adjoining thereto, fill up the ditch round the Park —form and gravel the Walks and Roads, and make the brick drains, all of which are to be done according to the Plan, and as described in the Specification dated the Thirty first day of May last—for the Sum of Eight Thousand three hundred pounds. [*Letter by McIntosh to Nash*, 11 *June* 1827].

In landscaping St. James's Park, Nash achieved a remarkable effect of spaciousness in a very limited area. This largely depended on continuity of floor surface—street to path, path to grass, grass to water and so on—unobstructed by the sort of visual obstacles (trip-wires, railings, posts, shrubs and flower-beds) which today are rapidly shrinking the park into a fussily complex botanical garden. On the following pages these and other recent practices that are endangering the survival of the park's charm and character are illustrated, and contrasted with examples of the sort of treatment that Nash's conception requires.

1 boundaries

There seems to be some confusion as to the visual limits of St. James's Park. This is particularly evident along Birdcage Walk, above, where a quite amazing number of vestigial boundaries have inserted themselves below the trees that line the inner pavement. Most of them seem bent on preserving thin strips of grass that have no apparent purpose, æsthetic or practical, and themselves contribute towards breaking the continuity of surface and thus destroying one of Nash's major successes in the landscaping of the park. The drawing, section and plan on the right show how this could be avoided, while still keeping the unruly populace under control. Paving is taken right across the pedestrian avenue (with a ring of cobbles surrounding the trees), a shallow channel lines the pavement at its junction with the grass (a far more sightly hazard and just as effective as the trip wire), the embargo can still be reinforced by the existing hedge where a vista invites forbidden entry, but the hedge should be broken wherever the ground rises to maintain a silent embargo of its own, or where, as in the case at the bottom of the plan, the famous flower-bed impedes access (this is the one place in the park where a precedent for the botanical garden has been established and the plan shows the bed extended over an, at present, unnecessary path which parallels the roadside one).*



key
A Birdcage Walk
B turning to Queen Anne's Gate
C pedestrian avenue
D flower bed

* Though it is also in evidence along the Mall, with its utterly unsuitable pink asphalt surface, which entirely disrupts the continuation of the park.

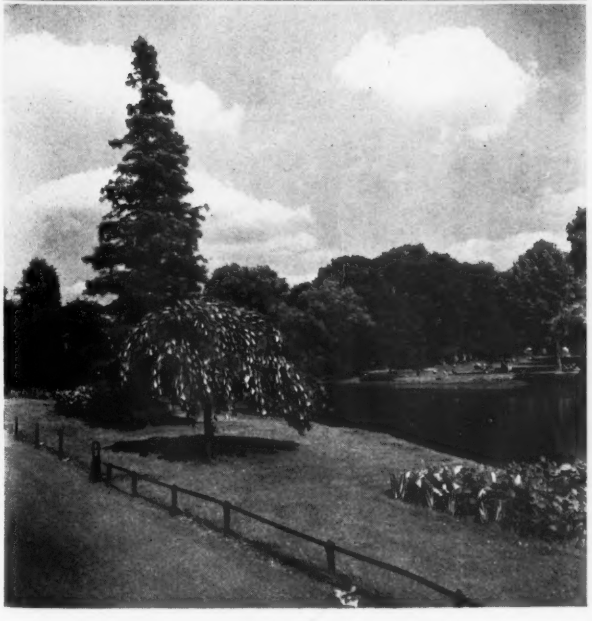
2 visual obstacles

Advancing further into the park, row upon row of obstacles reveal themselves. Fences like the one above, particularly where the ground is flat or the slopes are gentle, cut across and destroy the miniature vistas of which the park is composed. Where pedestrian movement has to be restricted, moral rather than physical hazards are quite sufficient, as several existing examples show. These should be designed with a view to regaining Nash's unity of floor planes, well illustrated in the photograph on the right, in which the obstructions are far less obtrusive though still too visible.

3 flower beds

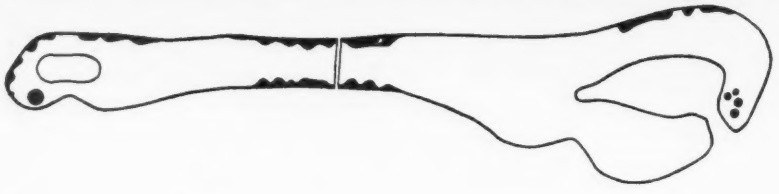
Formal beds, boxed in by diminutive railings, dotted and scattered about to no discoverable plan, are the exact antithesis of the sort of romantic landscape of which this park was once one of the best examples. If there are going to be flowers the photograph on the right shows how to handle them without destroying the spirit of the place.

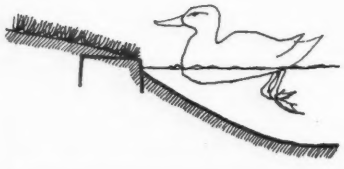
4 trees and flowering shrubs



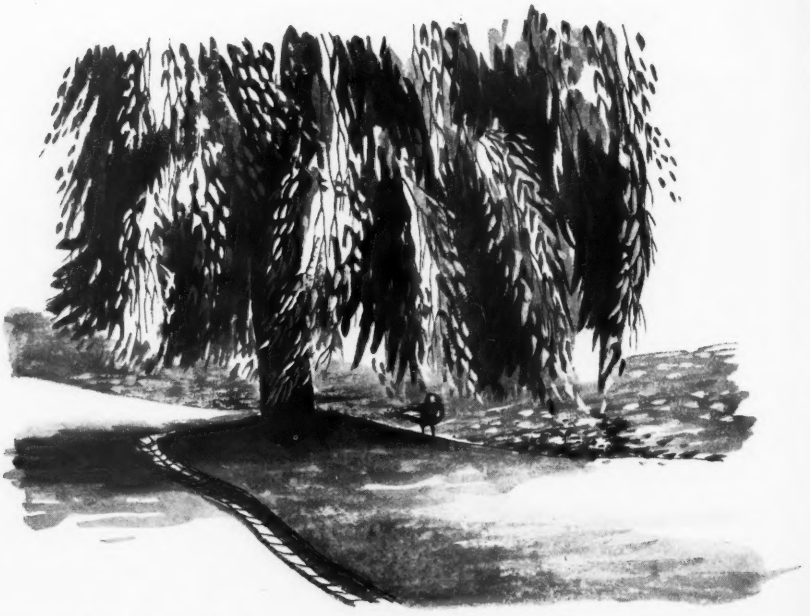
The one essential to remember in carrying out the necessary periodic replanting in the park is scale—breadth and generosity and never the dinky and niggling. The present policy leans almost entirely towards the latter. On the left are three examples of it. Top, perhaps the most inept of all, the recent creation (along the path from Queen Anne's Gate to the suspension bridge) of a sort of midget's avenue in the form of widely spaced and hideously shaped standard rhododendron bushes. Nothing could be better calculated at one stroke to destroy the atmosphere that Nash was at pains to create. The middle photograph shows a whole panorama disrupted by just one bush. Nor is the rhododendron the only offender. Along the shores of the lake the planting of flowering shrubs is rapidly obstructing the few that remain of Nash's beautifully contrived vistas. Attempts to achieve the ornamental—perfectly legitimate in their right place—are fatal to the natural, landscaped effect of St. James's Park. In the matter of tree planting the biggest danger (apart from clumps of May trees which, though planted some time ago, are none the less out of scale and character) is the conifer. One of several recent importations is shown in the lower photograph opposite. It hardly needs the reproduction of the superb, and still unsullied, view below to emphasize the inappropriateness to St. James's Park of the conical outline and the spiky skyline. As the inset drawing shows, even the plane trees along the borders of the park are trimmed into conifer shape. Surely this is an unforgivable mutilation of a tree whose natural form is so superb and so in keeping with the park. It would be perfectly easy to lop branches where they overreach the road too far and endanger traffic, while allowing the trees to grow in their natural shape.

5 waterside trim





Nash's simple treatment of surfaces in the park is particularly well shown where land meets water, where grass or path slips gently to the water level unhampered by miniature walls or iron railings, above right. The way he did it is shown in the small sketch, below left. However, each year, it seems, new encroachments are made on the lake in the form of lumpy bays, above left, often filled with unsuitable flowers; and bearing no relation to the contours Nash created and allowed to dictate the outline of the lake. The plan on the left is the outline as Nash intended it, the black marks indicate where the lumps referred to have been built out.

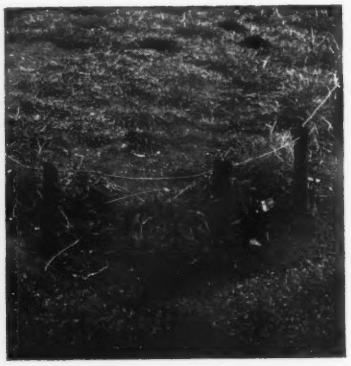


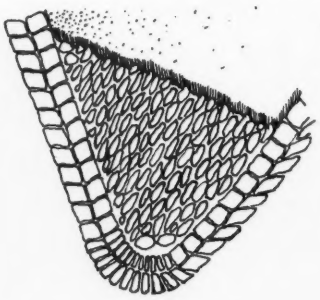
What was obviously another land and water rule of Nash's in designing St. James's Park was that either the path or the grass should meet and follow the water, but not both at the same time, as in the photograph, above left. The idea of having a band of grass with inset flower-beds and a little stone wall round the edge of the lake, is in the later municipal-ornamental and not the park, landscape tradition. Nash either had a clear expanse of lawn going down to the water or a clear expanse of path. The example on the left shows a surviving instance of it, negatived however by unnecessary railings at every turn. The only place where an obstacle is really needed is at the junction of path, grass and water, for that is the sort of place that tends to get worn and squalid. The drawing above shows one way to handle it—a weeping willow, which provides a natural and very beautiful obstacle.

6 islands

It is hard to discover any reason, practical or æsthetic, for the circular concrete island (in the right of the photograph above) of the type lately installed, especially when a few yards away is a splendid example of Nash's way with an island. Below left are some other even more futile ones, at the far end of the lake. The rocks below, skilfully linked with the island and made to look as if they are an outcrop, show the right way of doing it.

7 path trim



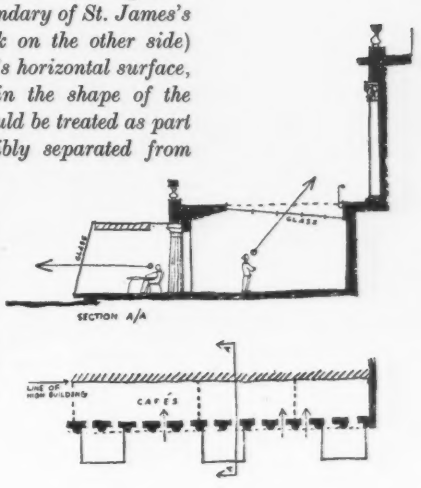


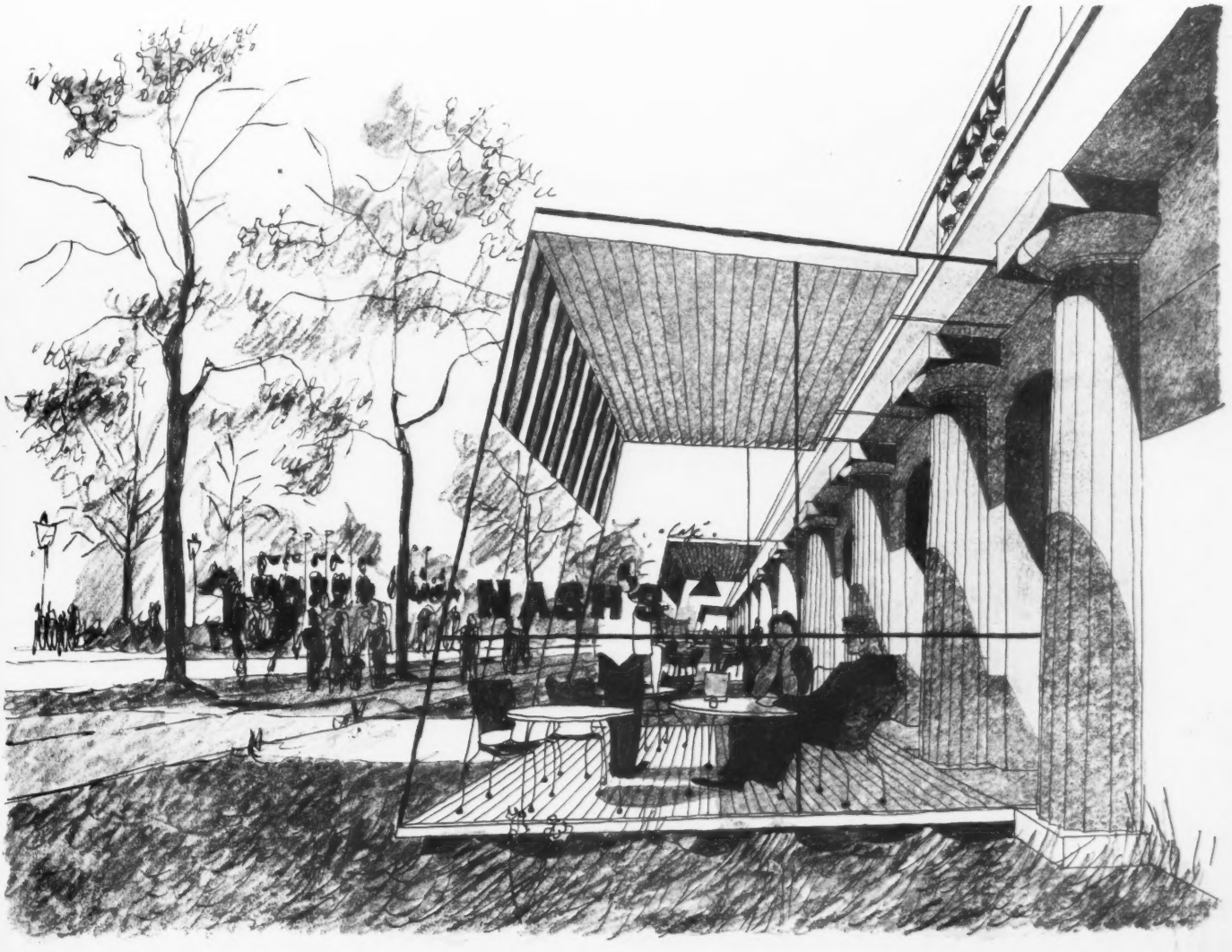
Far from safeguarding the grass verge, vestigial fences like these only serve to exaggerate the squalor which is inseparable from lawns coming to this kind of a point. It would be much better to remove them both and finish the thing properly with a neat panel of cobbles.

8 structures

Though built after Nash's improvements were made, the cast-iron suspension bridge over the middle of the lake, now adorned with greenery, harmonizes perfectly with the landscape. It is in striking contrast with the dreadful structure, at the top of the facing page, built in 1922. *Nothing more pretentiously out of keeping with the park could have been devised. In addition, as the photograph shows, it is badly placed for servicing, and the customers when they have struggled round the pillars for their tea and buns are inextricably mixed up with passers-by and are provided with no view whatever. An alternative method of providing space*

for selling refreshments and shelter to consume them in is suggested in the drawing below (by Gordon Cullen). The projecting bottom storey of Carlton House Terrace is converted into a row of cafés. The space is not at present well utilized, it can be given all the light it needs from the top (see sketch on right) and there is plenty of room in front for sitting out of doors with whatever protection in the way of awnings or glass screens the English climate requires. Carlton House Terrace is the true boundary of St. James's Park, the Mall (like Birdcage Walk on the other side) being part of the park—part of Nash's horizontal surface, terminated by his vertical surface in the shape of the cliff-like facade of the Terrace. It should be treated as part of the park, but is at present forcibly separated from it by too obstructive railings and by the hideous and inappropriate pink colour of the new asphalt road surface. The scheme illustrated would bring back to the Mall the leisureliness and humanity that belongs to a drive in a park, instead of the bustle of a motor-road, and enable the public to enjoy Nash's beautiful landscape in comfort.

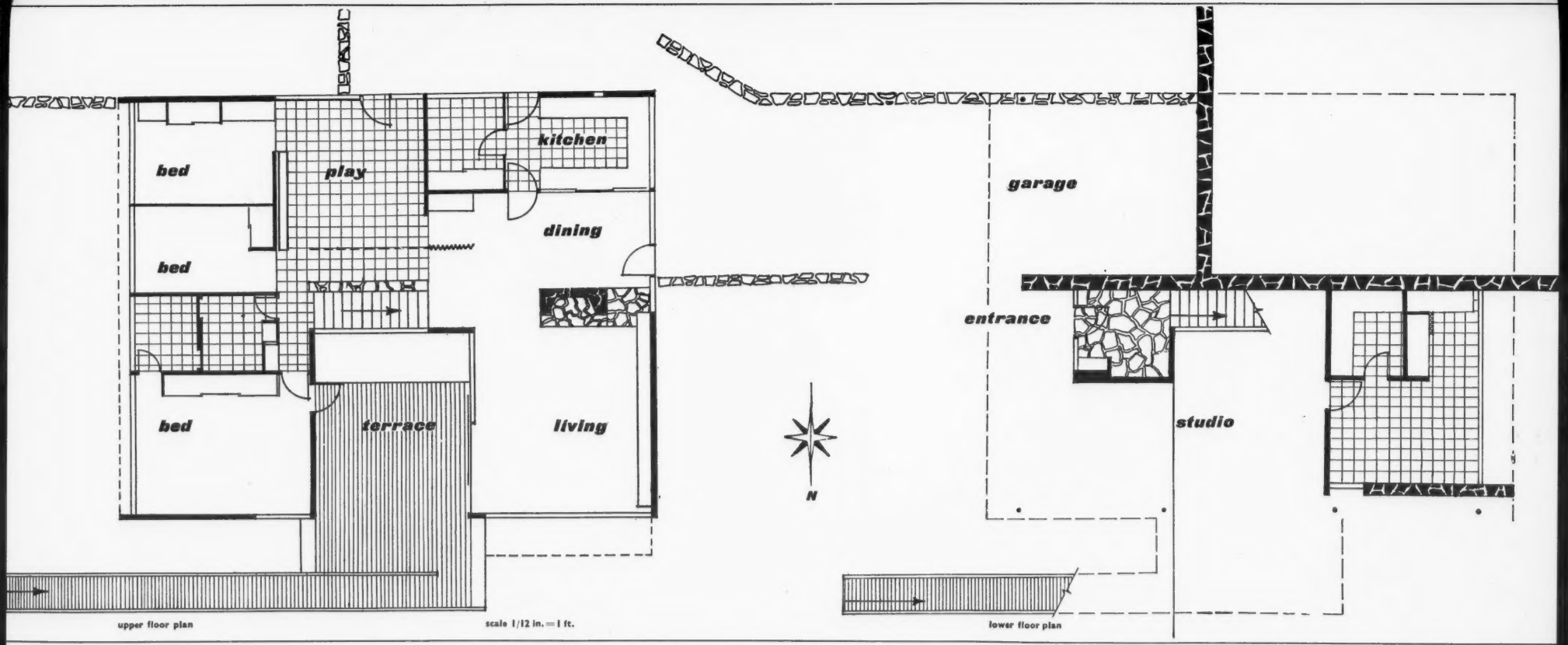




In his article *A New Eclecticism?* which appeared in the September REVIEW Robin Boyd contrasted the styles of two recently built Australian houses. The same houses are here illustrated in greater detail.

HOUSE NEAR SYDNEY AUSTRALIA

HARRY SEIDLER: ARCHITECT



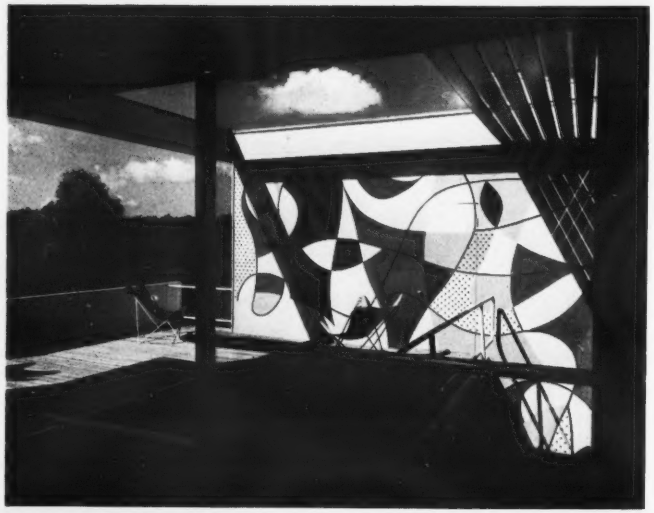
upper floor plan

scale 1/12 in. = 1 ft.

lower floor plan

The sloping site on which this house is built has resulted in a main living floor which is accessible from the ground on one side and is elevated on the other. The construction of the upper floor is of timber frame supported on steel columns with a sheathing of tongued and grooved boards. Floors are concrete and roof timber. The lower floor walls are of cemented local sandstone. Timber balustrades to the long ramp are formed of several laminations as structural beams. Glazing bars are wood, casements metal. All external woodwork is painted white.

Above, the house by day showing the upper level entrance and the range of bedroom windows. Below, the house at night.



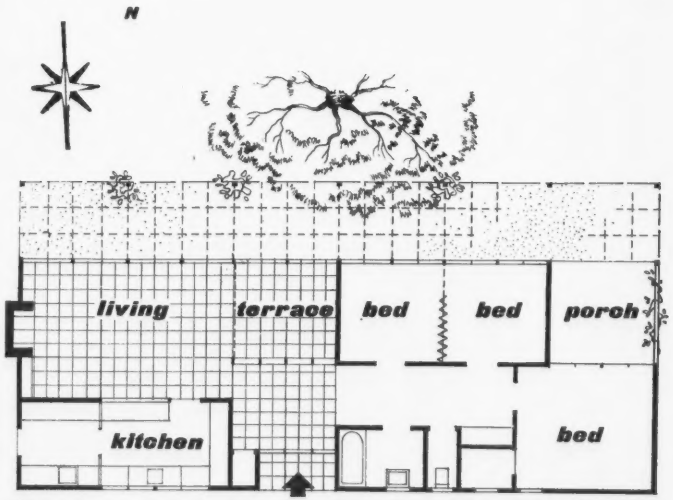
HOUSE NEAR SYDNEY, AUSTRALIA

The main living room seen on the right of the photograph above has a fully glazed wall to the outdoor living space. Half of this wall slides clear for access. On the left are, above, the outdoor living space and mural, seen from the living room and, below, the upper floor playroom.

HOUSE NEAR MELBOURNE, AUSTRALIA

HOUSE NEAR MELBOURNE AUSTRALIA

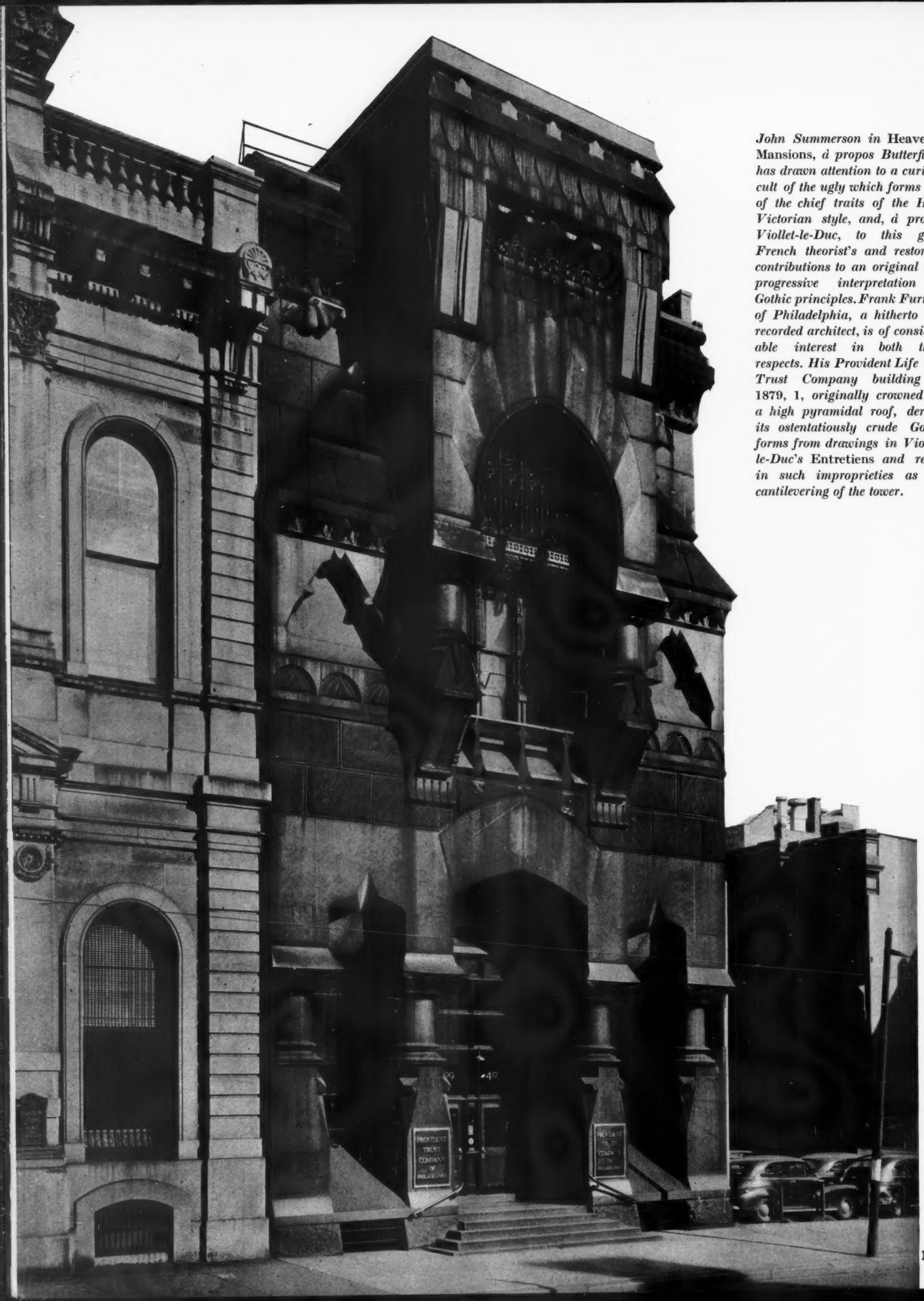
ROY GROUNDS: ARCHITECT



plan

scale 1/16 in. = 1 ft.

The timber construction of this house is left revealed and extended in the front to form a pergola. The design of this north façade is based on a 2 foot 6 inch module. Window frames are entirely timber. Framing members are painted white, sheathing timbers have been left rough and oiled. The outdoor living area at ground level is gravelled.



John Summerson in Heavenly Mansions, *à propos Butterfield, has drawn attention to a curious cult of the ugly which forms one of the chief traits of the High Victorian style, and, à propos Viollet-le-Duc, to this great French theorist's and restorer's contributions to an original and progressive interpretation of Gothic principles. Frank Furness of Philadelphia, a hitherto unrecorded architect, is of considerable interest in both these respects. His Provident Life and Trust Company building of* 1879, 1, *originally crowned by a high pyramidal roof, derives its ostentatiously crude Gothic forms from drawings in Viollet-le-Duc's* Entretiens *and revels in such improprieties as the cantilevering of the tower.*

William Campbell

FRANK FURNESS

AN AMERICAN PIONEER

Frank Lloyd Wright was the pupil of Louis Sullivan. Louis Sullivan was the pupil of Frank Furness. Frank Lloyd Wright is known to everybody, Louis Sullivan at least to the readers of THE ARCHITECTURAL REVIEW, of Furness no one knows anything. Yet, as the illustrations to the following article show, he was a remarkable artist—æsthetically as well as historically. Mr. Campbell establishes here the chief facts about Furness's life and work, and the notes to the illustrations provided by Dr. Pevsner place him in relation to contemporary Europe.

IN 1867 one Frank Furness, a young man of twenty-eight years, late captain of cavalry in the Union forces in the Civil War, fresh from the atelier of the celebrated Richard M. Hunt, opened, in his native city of Philadelphia, his office for the practice of architecture, where some twenty-six other gentlemen of varying abilities were already in the field.

Philadelphia architecture had undergone no sudden upheavals, but had quietly developed along conservative lines from its seventeenth century beginnings. Charles Bulfinch noted in 1789, 'The city is not much altered since I was last here . . . the same plain stile of building is kept up,' and eighty-one years later, the Rev. William H. Furness, father of Frank and Horace the Shakespearian scholar, wrote: 'Only think what a long day of it one particular style of building (The Quaker style . . . marble steps and wooden shutters) has had here in Philadelphia.' In the miles of these terrace houses, mostly of brick, some of marble or other stone, was a goodly sprinkling of Georgian of high and low degree, Greek Revival buildings, some of which had been designed by architects still in practice, and a small amount of quite recent 'Gothic.'

Of architectural magazines, there was none in America, and in the English language, only *The Builder* of London was known. But two years later, in 1869, within a stone's throw of Furness's office appeared the first American architectural periodical, *The Architectural Review and American Builders Journal*.[1]

Furness's life pretty much paralleled the reign of Victoria and the industrial revolution, which found the mid-nineteenth century, like the mid-twentieth, in an era of change. Steel, which had previously been used chiefly for cutlery and tools, had begun in a modest way to come into its own. In Philadelphia, in 1851—the year of Paxton's Crystal Palace—J. B. Cummings designed for the Penn Mutual Life Insurance Company 'a building of beauty and originality . . . entirely of cast iron.' This was the first of this material erected in Philadelphia, and had a mode of construction 'dissimilar to any iron building in this country or Europe.' Many of the plates were not over one-quarter of an inch thick, and none over one-half.

The steam elevator did not appear in office buildings until the early seventies, and not until 1884, seventeen years after Furness began practising, did Jenney give to the world the principle of using a metal frame for the support of masonry walls.

The new magazine, which among other subjects was to treat of iron and its application to buildings in fireproof construction, deplored the fact that the 'discovery, or rather development of the capabilities of the great mineral age, had subjected American architecture to a flood of novelty from Europe with which we had run riot in the field of taste, to the point of subjecting the present to a charge of absurdity,' complained that the best of our architects were compelled to follow 'in the track of the triumphal car of fashion or linger idly by the wayside,' and sent out a clarion call for an 'American style.'

Thomas Harris, in England,[2] soundly preached that a new style could not be invented but must be born of new methods of construction. Whether or not Furness had read Harris's *Victorian Architecture*, he had pretty much the same point of view, and the resemblance went somewhat further. Mr. Harris, according to Mr. Harbron's article, was 'a huge shaggy man with a rather scraggy beard and a deep booming voice, and could explode in a rather terrifying way. Not the sort of figure that any would forget who had ever encountered him. In his *Autobiography of an Idea*, Louis Sullivan says: 'Frank Furness was a curious character. He affected the English in fashion. He wore loud plaids and a scowl, and from his face depended fan-like a marvellous red beard, beautiful in tone. . . . Moreover his face was snarled and homely as an English bulldog's.'

It was 1873 and Sullivan fresh from school had come to Philadelphia where he saw a residence nearly completed which caught his eye 'like a flower by the roadside . . . here was something fresh and fair to him, a human note, as though someone were talking.' On inquiry Sullivan was told that the architects were Furness and Hewitt, but he 'saw plainly enough that this was not the work of two men, but of one,' and so made up his mind to enter their employ. Furness's first question had been as to Louis' experience, to which Louis replied, modestly enough, that he had just come from the Massachusetts Institute of Technology in Boston. This answer was the detonator that set off the mine which blew up in fragments all the schools in the land and scattered the professors headless and limbless to the four quarters of earth and hell. '. . . He said Louis was an idiot to have wasted his time in a place where one was filled with sawdust, like a doll, and become a prig, a snob, and an ass.'

Sullivan, however, was taken on, and while he admired Furness's partner as a draughtsman, he regarded him with mild contempt as a man who kept his nose in books, but 'Frank Furness made buildings out of his head. That suited Louis better. And Furness as a freehand draughtsman was extraordinary. . . . In looking back upon that time, Louis Sullivan gives thanks that it was his great good fortune to have made his entry into the practical world in an office where standards were so high, where talent was so manifestly taken for granted, and the atmosphere, the free and easy one of a true workshop, savouring of the guild, where craftsmanship was paramount and personal.' High praise from the man who has left such an indelible stamp on those who followed.

While Sullivan gives Furness credit for making buildings out of his head, he doubtless consulted such books as Viollet-le-Duc, and César Daly and other current works, although he injected into his interpretations his own personality. Much of his ornament is out of his head in the spirit of Gothic, rather than out of books in the form. Moreover, many of Furness's summers were spent at Cape May, and here he drew the native flora, that was later translated into stone and terra-cotta as decoration for his architecture.

Furness's father was a minister and a gifted speaker. In 1870, three years after the opening of the office, he addressed a body of the American Institute of Architects of which Frank

[1] Nothing to do with this ARCHITECTURAL REVIEW.

[2] See THE ARCHITECTURAL REVIEW September 1942 and February 1943.

was a member. His remarks are especially interesting as we look at the work of his architect son, and hear the comments passed on it by the contemporary press. 'I verily believe, gentlemen,' he said, 'that the idea of the excellence of any given edifice depends with most of us non-members, upon whether it is old or new. If we have never seen it before, either in buildings or in prints or photographs, we pronounce it odd, and when we call a thing odd, we find it difficult to see how it can be called beautiful. With all our freedom we do not tolerate oddness. We insist in this country upon everything being cut to pattern . . . it is an adventurous thing in this land to set before us anything of which we cannot at once tell what we think. We resist it as a personal insult, and take satisfaction, the law of taste, into our own hands, and condemn it . . . and as you must execute your work out of doors . . . it suggests that you must make up your minds once for all, and consider it an indispensable condition of an architect's existence, that he is to be criticized and wondered at, and laughed at, at every stage of his work . . . and seeing it, is it not in human nature, at least in the present state of architectural ignorance, that we should not think and talk about it, unwisely of course.' Reminding them that the old excuse, that lack of taste was due to the lack of good monuments among us, was no longer valid, because the photograph and the stereoscopic view had opened up a new era, he ended with a plea that 'we are building now of iron, and we require a new style of building fitted to the material, so that iron shall have its honest credit and publish its massive strength, looking like what it is, and not like wood or stone. Shall this homely substance have its rights . . . will it not demand . . . will it not create new orders of architecture? Answer us, gentlemen, please, in your works.'

When, in 1871, the aunt of Allen Evans, a young gentleman with a penchant for cricket and architecture, who had been working for another architect, wrote to Mr. Furness, asking him to take her nephew into his office, he showed his faith in himself by replying: 'I fear that Mr. Evans would have to unlearn all that he has been through with Mr. S. . . . I do not wish to seem conceited, but I really think that if Mr. Evans can spare the time, it would be of benefit to him to work with Mr. Hewitt and myself.' Allen Evans came and within a decade was his partner. And with the exception of five or six of the early years, there always were one or more partners, who must have had some part, however slight, in determining the design of the finished building.

About this time, 1872, the work was going ahead on the new building for the Pennsylvania Academy of the Fine Arts, 2, and about this time too Ruskin was preaching a return to the Middle Ages and his admiration for the work of Northern Italy. This probably influenced the design of the Academy, a building whose exterior proclaims well its use and arrangement. Unfortunately the illustration does not show the Cherry Street elevation, which interestingly defines the school on the first floor, with its north light coming through heavy glass set at an angle of about forty-five degrees with the horizontal, and the windowless galleries with skylights on the second floor.

Another 'Venetian' building was that for the Guaranteed Safe Deposit and Trust Co., 3, 1875. In Westcott's *Guide to Philadelphia* for the same year, it is described as 'A very large solidly-built and odd-looking building of brick, grey stone, black stone and tiles. . . . The front is made conspicuous by two square towers with mansard roofs. The . . . appearance of the building is so peculiar that it attracts much attention.' It still does.

A few years later when the building for The Provident Life and Trust Company went up, 1 (p. 310), it created a stir. *The Evening Telegraph* reported: 'Some years ago there was published in *Punch* a very clever cartoon, representing two gentlemen walking arm in arm along Regent Street. One of them is rather tall and handsome, with a quiet, dignified, but withal somewhat puzzled expression; the other is small, and with a waggish air of assurance presses the head of his cane against the end of his already stubby nose so as to give it a decided upward tendency, which manœuvre attracts the observation of every passer-by. The footnote explains that little Sniffkins has taken this means of drawing away from his handsome companion some of the attention and notice which the latter usually has all to himself. With all gratitude to the Provident . . . for its boldness for stepping out of the beaten road to put up a façade so utterly different from those of its neighbours, there is yet something in this effort, which . . . irresistibly recalls that cut in *Punch*. Among all the structures that have been put up in that "square" . . . which one has attracted one-third the attention that this has, and entirely because of its eccentricity?

'Pretty much all the neighbouring fronts have gone up quietly . . . of thorough mediocrity of design; none of them have provoked any especial remark beyond the usual one of "fine building"; none of their designs have ruffled the even tenor of Philadelphia thought. They have not offended the average public, nor have they puzzled the mind of the average citizen with anxiety about what would be done next . . . but with this front, there seems to have been a new surprise every few mornings, and there has been a constant strain on the public mind as to what might be coming. This strain has finally been relieved by the last stones having been set in their places. Can it really be that this is a coming American Nineteenth Century style which we are slow of heart to recognize?

'The contrast of the building with its "utterly commonplace" neighbours induced the writer to believe that Mr. Furness has prepared his design without for a moment considering the surroundings that his work would have. The tower, partially supported on cantilevers, the columns, "the height of the shaft of which is little, if anything, more than the equivalent of their diameter," the doors in the piers, all came in for castigation, and as to scale—"Mr. Furness' strong point seems to have been to get all his decorative detail large enough for a building about double the size of the one he puts it on, so that it is apt to have a decidedly awkward appearance. This is very noticeable in his other large buildings, and now with smaller spaces he appears to have succeeded in getting his detail larger and more out of proportion than ever. . . ." ' After this and other criticisms, the article ends with: 'If other buildings in this block had been more carefully studied and were better in design, people would appreciate this one more fairly . . . if this building had been the first improvement in the block, the others following it in order of erection would undoubtedly have been better for its influence. Some of these days, when the block is finished out to Fourth Street, in spite of the adverse criticism this building is now getting, the chances are it will be acknowledged to be quite as good, if not better than any of those west of it; in other words, let the public become better acquainted with it, and they will become better judges, and perhaps learn to like it better, for it has certainly been the best educating medium of the lot.'

The National Bank of the Republic, 1884, 9, 10, 11, which appears almost to be two narrow buildings, does not acknowledge on the front elevation, the large banking room within, with its interesting decorative roof trusses. Once past the vestibule, and front offices, the great room is as simple as the exterior front is complicated.

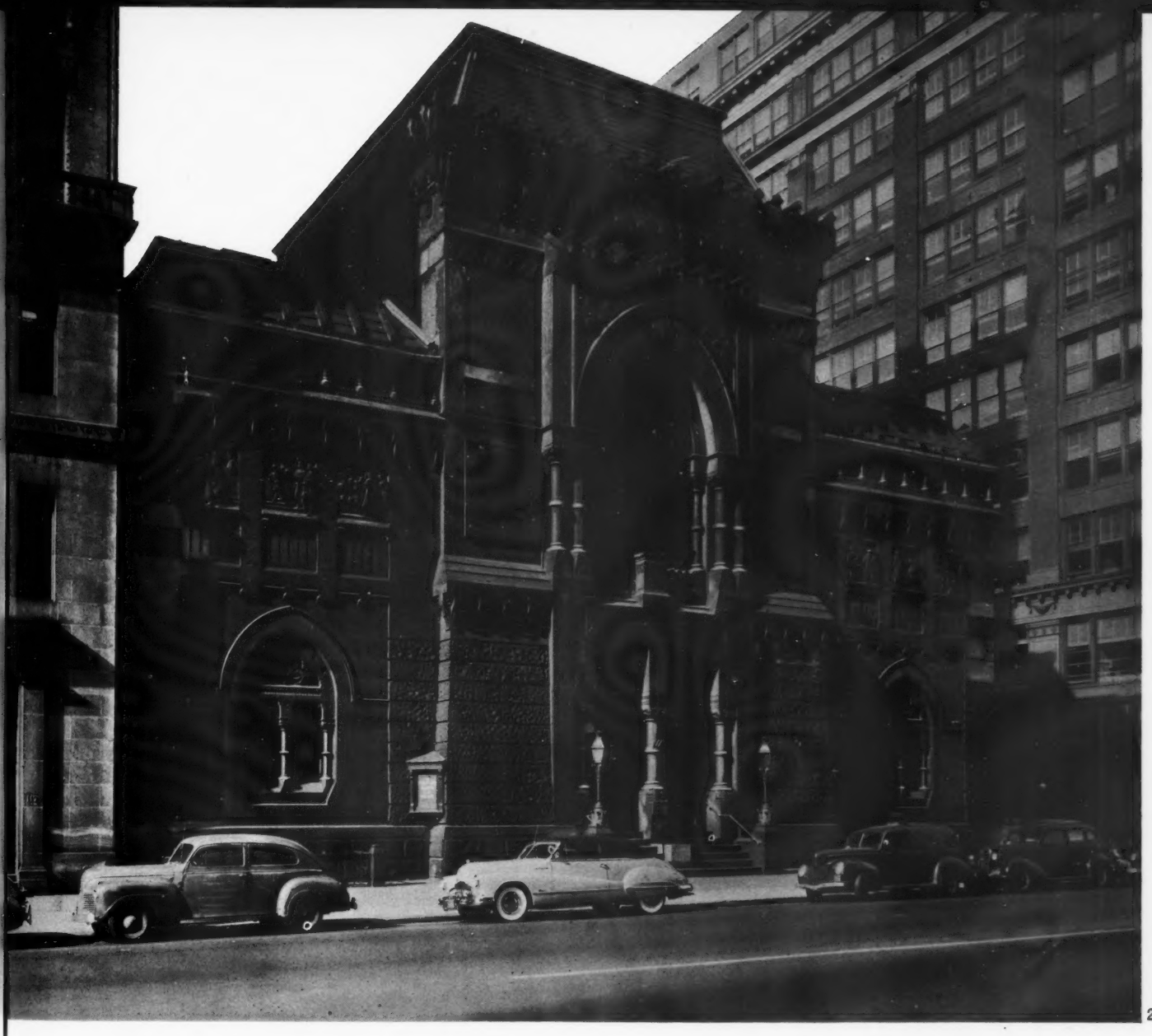
The library of the University of Pennsylvania has drawn perhaps as much fire as any Furness building, but the *Library Journal* for 1888 states that 'it will not only be the most economical library building ever constructed per volume, but will also be . . . by far the best and most convenient.' The sloping glass roof in the stacks was calculated to throw the light further than if it were either vertical or horizontal, and the translucent glass floors let the light through but not the dust, as does 'the iron cross-bar floor usually employed,' Moreover, the construction was such that additional floors could be added as to a sectional bookcase. The plan of the stacks admitted of 'indefinite expansion' by extending the stack a bay at a time, the end wall being moved out on jack screws.

The catalogue was to stand in a partition between the cataloguing room and the reading room, and 'a simple mechanical device is expected to make the same cards and drawers accessible to both the public and the library staff. Whether this will work, only experience will determine.' If it was ever put into operation, experience determined that it should be otherwise.

By the year 1892 Broad Street Station, 12, the main terminal of the Pennsylvania Railroad in Philadelphia, had outgrown its building and needed a size larger, and for this work, after numerous plans from well-known architects had been submitted, Furness was selected by a unanimous vote on the first ballot. The trackage was expanded and the old shed, which was in two spans of eighty-five feet each, and one or two small ones, was replaced by the new shed over three hundred feet wide, then the largest in the world. This was built over the old one without interruption of service, and the old one later removed. It contained three thousand tons of iron, and an acre and three-quarters of glass in the roof. Like the Crystal Palace, it was destroyed by fire; a seeming impossibility. The old general scheme was retained in so far as possible, but the plan necessitated an almost complete rearrangement of the utilities. The office building was placed athwart Fifteenth Street with the street level traffic running beneath it. The press of the day devoted a great deal of space to adulatory articles. *The New York Times* thought that the liberality and art progression shown by the Pennsylvania Railroad in the ornamentation of its new station was 'An encouraging sign of the times, and an example that New York might well emulate.' 'It rarely happens, indeed conditions are unique, that in the construction of a building for purely commercial purposes, much time, great attention, or considerable expense is spent upon decorations of a purely artistic nature, that it is a pleasure to chronicle a new departure, and one that cannot fail to have a strong influence on the public and be of lasting educational advantage. . . . Wherever there has been a possibility to combine in their buildings, sculpture or mural decorations, advantage has been taken of it. . . . Mr. Furness possesses a keen decorative sense, and a wonderful enthusiasm for things artistic.' Karl Bitter, who, through Furness, was chosen to execute the sculptural groups, worked continuously for three years on the sculpture for Broad Street Station. The panel on the Market Street end of the underpass, was, at the time of erection, the largest piece of terra-cotta ever fired. Furness and Evans were praised for their courage in using terra-cotta for the 'constructive decoration and for the artistic adornment' of the new building, as in constructive work, terra-cotta was still regarded in somewhat of an experimental light. *Harpers Weekly* announced that it will 'exceed in every respect all other railroad terminals in the world . . . the entire structure with its six million pounds of iron will present the appearance of a gigantic sun parlour.' Still, its forms are perhaps no longer quite as revolutionary as they had been in the seventies and eighties. Furness's later work tends to be more traditional and less easily identified.

Furness was a beautiful draughtsman and an artist. He planned well and built well, and he was fond of novelty and originality. He used half arches and supported supporting columns on brackets. He built the Commercial Trust Building out over the sidewalk and placed the Broad Street Station Building in the middle of Fifteenth Street. In the Baltimore and Ohio Railroad Station he placed two fireplaces in one motif and in the Academy of Fine Arts he supports the keystone of an arch on a column. He was fond of using colour and of the nature that he saw around him. He liked to draw flowers and dogs. His early work has a certain simplicity and largeness of scale, sometimes surprisingly so, that often makes it stand out as something more virile and interesting than its more quiet and less energetic neighbours. Much construction was allowed to show, roof trusses were in evidence and were both the structure and the decoration. Lintels were bare iron with decorative rosettes that were probably accenting rivet or separator heads. He held lack of originality in contempt, ridiculed the copying of Grecian temples for banks, and held that any building should proclaim its use and serve to the maximum degree the use to which it was to be put. 'He found the architectural soil of Philadelphia quiescent. It was he who ploughed the ground and prepared the soil that produced the architectural renaissance that followed.' Even so, however, in spite of his evident desire to break with tradition, tradition was too strong for him, and no complete break ensued.

Still, those who today rejoice in a complete freedom finally conquered in the course of long struggles should not forget that to reach Wright, Sullivan was necessary, and to reach Sullivan perhaps Furness.



2

2, *The Pennsylvania Academy of the Fine Arts, built in* 1872, *when Furness was thirty-two. The rusticated parts are of brownstone, the smooth surfaces of lighter stone, the columns of polished pink granite, the bricks red with patterns of dark blue vitrified headers. On the pedestal in front of the central upper floor window originally stood a Greek statue which however began to disintegrate and had to be removed. The top had a metal casting in the raised middle pavilion and skylight and clerestory window in the side parts. The Academy is a building of great boldness and much personal character. The clash between its facade and the motor cars in front is not harsher than that between such a motif as the* trumeau *of the portal and the segmental arch against which it runs—the one of thirteenth, the other of eighteenth century derivation. The same perverse delight in clashes of form appears between the pointed windows on the left and right and the relentlessly repeated horizontals above them and pressing down on them. No wonder that young Louis Sullivan sensed behind such building a character strong enough to work under, and no wonder that Furness had a relentless hatred against academic standards and academic education.* 3 *is the Guaranteed Safe Deposit and Trust Company building of* 1875. *Brick with bands of light polychrome glazed tiles. In the upper parts the bricks are set vertically and cornerwise. The details of the pavilion roofs display already those ornamental forms which in some of Furness's later works take him so near to Sullivan and Art Nouveau.*

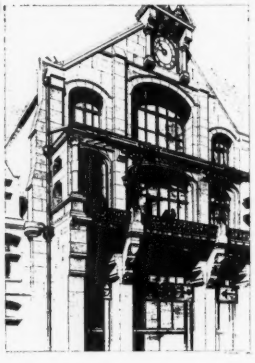
3

4

5

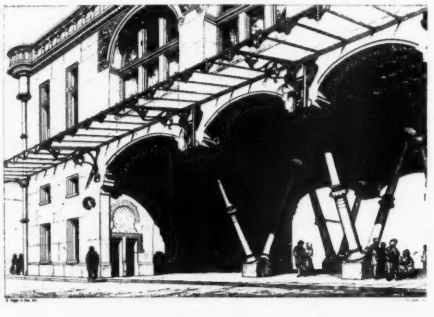
4, *Livingstone House of* 1881. 5, *No.* 429, *Walnut Street, attributed to Frank Furness by Mr. Campbell. Parallels to Furness's old style are not entirely lacking in England—Burges and Thomas Harris are the names that will at once come to mind—but Furness's sources are in all probability not English but French. It is sufficient to compare these two houses with two plates,* 6 *and* 7, *from Viollet-*

6



le-Duc's Entretiens, *and to know that Viollet-le-Duc gave these lectures in* 1859-60, *and that they were published in French in* 1863-72 *and in English in* 1877-81. *The plates here reproduced are of a town-hall and a market-hall. An American edition also existed, but*

7



came out too late for Furness to use. However, as a pupil of Richard M. Hunt, who had been trained in Paris and was proud of it, Furness may well have had access to the French edition. It must have impressed him decisively, and what in Viollet-le-Duc remained on paper became brick and stone in these early buildings of Furness. They are, just as Viollet-le-Duc demanded, Gothic much more in principle than in their details, and they possess in addition a fertility of invention not frequently matched before the days of Norman Shaw and Art Nouveau.

8

9

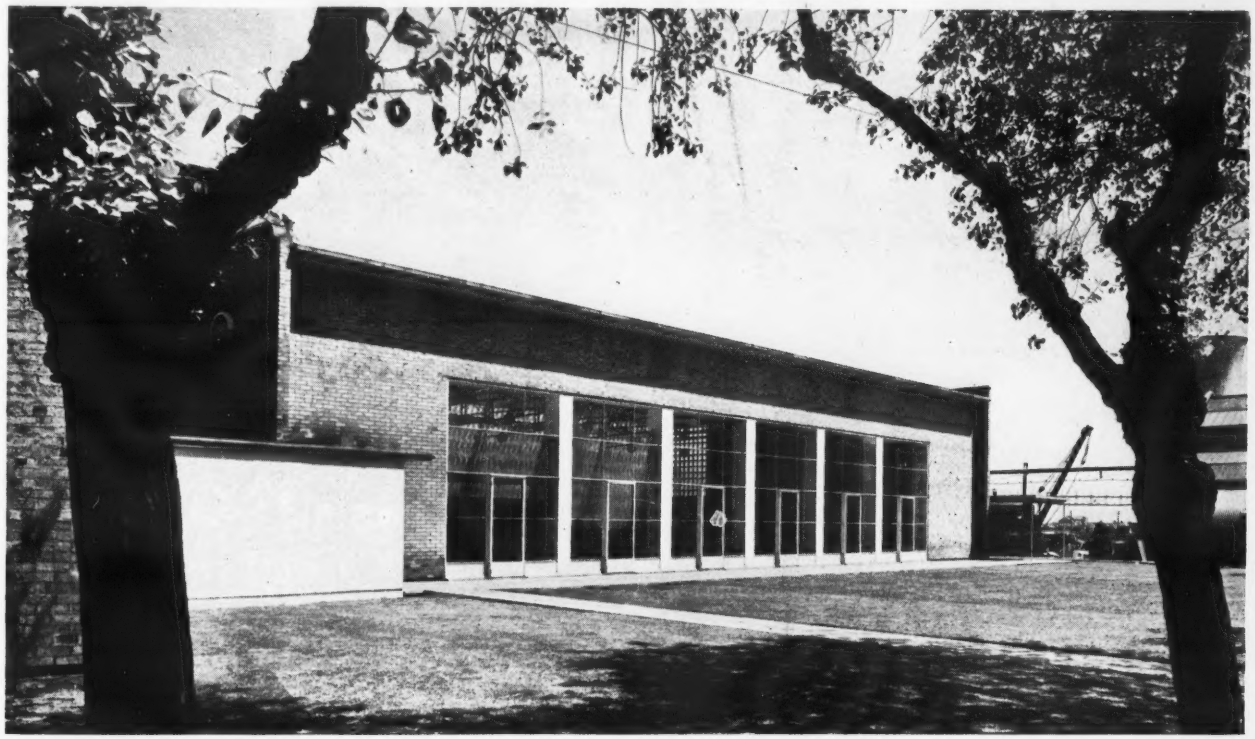
8, *The Penn National Bank of* 1882 (*pulled down*) *and* 9, *the National Bank of the Republic of* 1884. *The Penn National Bank has the smooth stonework below and the rusticated stonework above, a deliberate reversal of Renaissance traditions. The* tourelle *of the National Bank had originally a conical roof and there was also a great deal of carved stone ornament spread out over large parts of the facade. The half-arch of the entrance had appeared in the Livingstone House before. Inside the vestibule of the Bank it is repeated, but in the opposite direction,* 11. *Herein and in other decorative details inside the National Bank,* 10, *the originality of Furness's ornament must be appreciated. It was developed during the very years in which Sullivan learnt under Furness, and, although it never achieves Sullivan's richness and intricacy, it remains historically remarkable.*

10

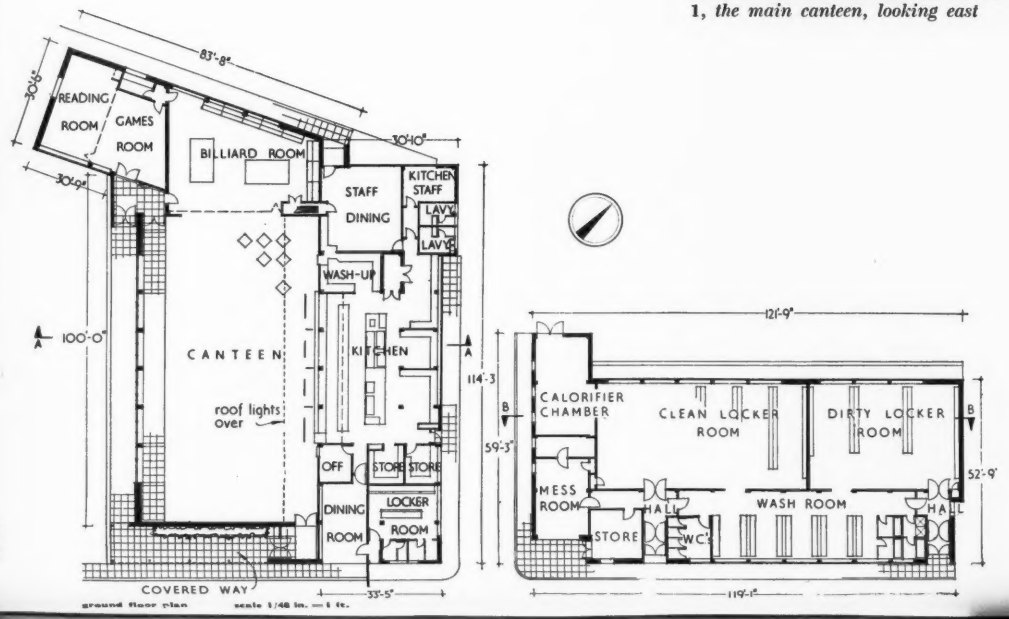
11

12

12, *Broad Street Station, Philadelphia,* 1892-94. *Furness's best known building. An addition to Wilson's original building of* 1881, *which appears on the right. Furness's block is on the whole more conventional than his earlier works. Much terra-cotta is used in the facing of the walls—a fashion in vogue at the same time in England,* see *Doulton's London offices and works in Lambeth on the Thames, and the buildings of Alfred Waterhouse—but also heralded by Viollet-le-Duc, who recommends it for the facades of town houses.*



1, *the main canteen, looking east*



ground floor plan scale 1/48 in. = 1 ft.

CANTEEN AT BROMLEY BY BOW

ARCHITECT: ELIE MAYORCAS

This canteen for the North Thames Gas Board includes a club for employees and washing facilities for the mechanics in two independent single-storey buildings. The building containing the locker rooms and washrooms is sited to permit extension parallel to the line of a future development of the mechanics' workshop. In choosing the position of the main canteen, advantage was taken of existing trees. Accommodation was required at meals for 300 men, 24 foremen and 30 administrative and technical staff; meals to be served in twenty minutes at one sitting, with a future capacity of three sittings for one meal-time; foremen's dining and washing facilities self-contained within the canteen building, and accommodation for games. The billiard room is placed so that amateur shows can be staged in the men's canteen. There is a reinforced-concrete frame and T-beam roof slabs (except in the main canteen). Reinforced-concrete suspended ground slabs and bricks are used for external cavity walls

COVERED WAY

ground floor plan scale 1/48 in. = 1 ft.

33·5'

119·1'

and internal partitions. The superstructure is supported on reinforced-concrete beams and piles cast *in situ*. The main canteen roof is of aluminium decking supported on steel lattice trusses. Walls are faced with London stock bricks with panels of frost-proof tiles at entrances. Roofs are covered with multi-ply mineralized bituminous felt on screed and ½-inch macadam with protected metal eaves fascia drips. Extended eaves projections, discharging rainwater on to concrete paving clear of the walls, avoids the use of metal gutters or downpipes. Floors are of a patent subdivided composition in kitchen, staff rooms, lavatories, washrooms and locker rooms; of hydraulic pressed tiles in kitchen and stores; elsewhere of muhuhu hardwood blocks. Walls have cement glazed dadoes to door height throughout and painted Keene's plaster above, except the main canteen servery wall, which is covered with acoustic tiles. Ceilings are of 1-inch woodwool and distempered lime plaster. In the games, reading and billiard rooms, acoustic tiles are applied to suspended ceilings. Doors and frames are generally of mahogany treated with a patent clear plastic finish.

3

2

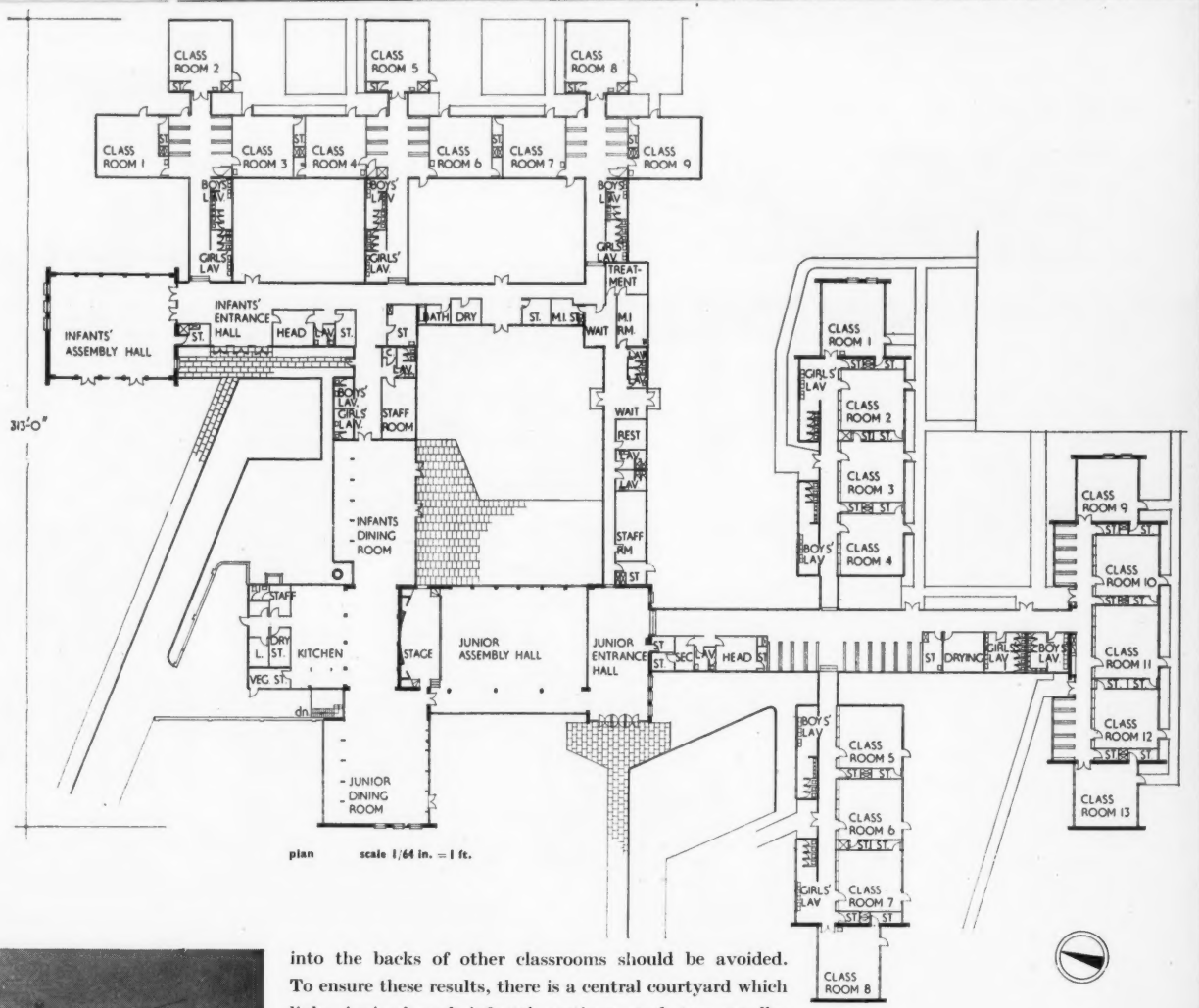
2, the windows of the main canteen, which face south-west. 3, *looking north-east, with the main entrance to the canteen in the foreground and the tank tower on the right*

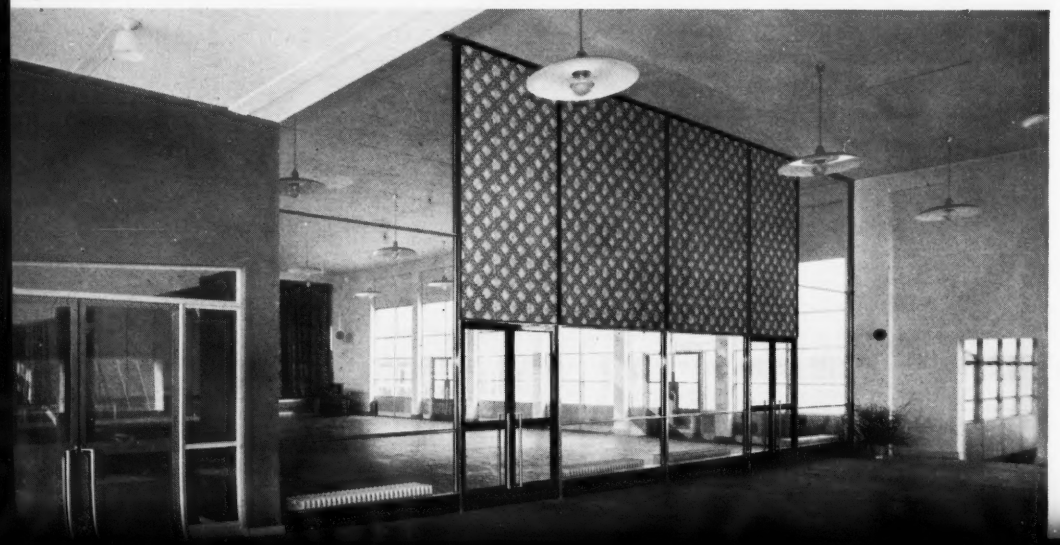
4, junior assembly hall left and infants' dining hall right. 5, junior assembly hall seen from the junior entrance hall

PRIMARY SCHOOL AT COVENTRY

ARCHITECTS: RICHARD SHEPPARD AND PARTNERS

This Primary School in Sadler Road, Coventry, for 360 infants and 520 juniors is the first large school to be built almost wholly of standard aluminium components. The road frontage is grassed and left unfenced, and the existing hedge retained. Two mounds of earth removed from the foundations form artificial hills; trees and shrubs are being planted. Limitations imposed on planning, inevitable in the early stages of development of this system of construction, suggested the general plan form, but the following points were considered essential: that the juniors' and infants' sections should have separate entrances and function as individual units, but with common kitchen, heating, and central medical inspection and treatment rooms; that classrooms should face south or south-east; that parallel blocks facing south looking





into the backs of other classrooms should be avoided. To ensure these results, there is a central courtyard which links juniors' and infants' sections, and two smaller courtyards to the east which may be used as sheltered gardens. Aluminium units are used throughout, except for the assembly halls, which have a concrete frame, standard aluminium roof units and standard glazed wall units. Externally the aluminium panels below windows have been painted in a limited range of bright colours, to contrast with the silvery grey of the structure. Internally, bright primary colours, patterned curtains and areas of wallpaper are used. Classroom floors are covered with plastic tiles in different colours, and wood block floors are used in corridors, halls and dining rooms. Stone from nearby quarries is used on entrance hall floors. The school was planned before the present rigorous economies came into force, and the cost of just over £150,000 represents **£170 4s. per place for 880 pupils.**

£7 7s. per place for 360 pupils.

POPULAR ART ORGANISED

THE MANNER AND METHODS OF RAYMOND LOEWY ASSOCIATES

Foreword by David Pleydell Bouverie In the four decades since Henry Ford applied the mass-production principle to the manufacture of cars which could reach the mass-market a far-reaching revolution has slowly overtaken all aspects of commercial organization in the USA.

The production principles which have made cars and complex household appliances a commonplace for the majority have now permeated BANKING for example (with its phenomenal cheque-sorting system); JOURNALISM (with its de-personalized amalgam of research, as exemplified in the weekly news magazines); the large ARCHITECTURAL ORGANIZATIONS (with their recourse to a large number of technical specialists, making possible a quicker co-relation of complex plans, achieving an impersonal, efficient integration, at the expense of clear, personal expression); and the INDUSTRIAL DESIGN ORGANIZATIONS.

The industrial designer in this category is a comparatively new phenomenon. He must possess some of the versatility, though not necessarily the designing ability, of the Renaissance artist. Also he must attempt to survive the synthesizing and (too often) de-personalizing process which results from the complexities of manufacturing methods and consumer-research in highly competitive markets. Nearly all his final designs are a result of conclusions presented by specialists with a wealth of statistical, technical, and psychological research data. Hardly ever can a 'line' here, or a 'finish' there be substituted without consultation. His continued success depends partly upon 'fingerspitzengefühl' and the ability to reach the right conclusions from a mass of technical data which, in detail, would be beyond the scope of one individual.

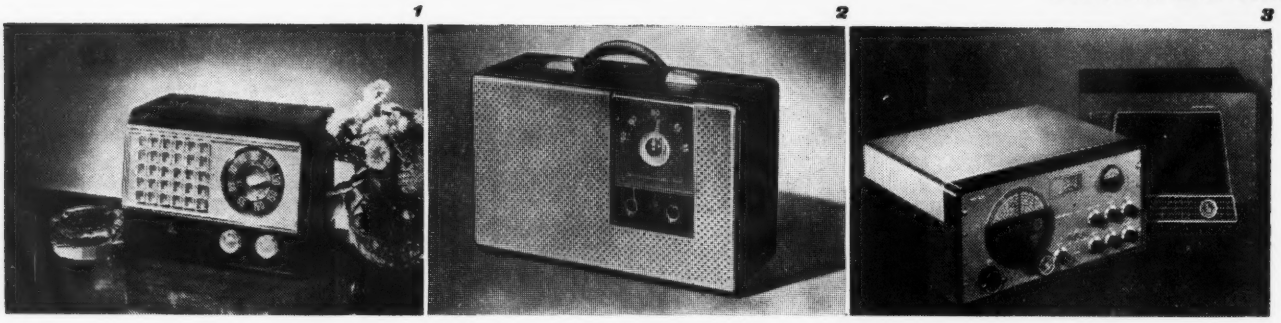
To indicate the scope of the large industrial design organization, all the photographs for this article illustrate the work of one firm, Raymond Loewy Associates. At the present time Loewy has 205 specialists in his employ not counting administrative or clerical staff. In addition, large assignments involve constant collaboration with the engineering staffs of such companies as Studebaker or the International Harvester company for whom Loewy has designed more than a thousand showrooms and repair shops for farm equipment.

When a client has outlined his requirements, Loewy calls a conference between the appropriate section of his staff and the manufacturers of the product. This conference sometimes lasts for as much as three days. After this, drawings, models and full-scale mock-ups are made in the office model-shop before the next conference is called.

Loewy's avowed working principle is to 'increase sales'. There is nothing particularly new or indefensible about this principle, in fact some of the finest designs in history have been conceived with a similar motive; what is new is the moloch of mass-taste which has become vocal and decisive as the result of the industrial organization which has so recently placed a plethora of articles within reach of the majority.

The generally high standards of design which prevailed in, let us say, the English eighteenth century were attributable to the very small, cultivated minority, and any expression of mass-taste in matters of design was as submerged, for the majority, as their capacity to buy. This was socially deplorable but æsthetically salutary.

The corollary is to be found in the American market of today, and it is an unfortunate fact that 'good' design finds acceptance more readily in a minority market. This is well



illustrated by three radio sets, illustrated above, all designed by Raymond Loewy.

1 An inexpensive table-model for the mass-market, as reprehensible a design as any in its category, but any refinement in design, or omitting the marble-izing of the plastic might result in a drastic drop in sales.

2 A portable for the middle-income market. Something very much better in design than No. 1.

3 An expensive radio, within reach of a small minority only. An excellent design, as good if not better than anything in its category.

There is such a misconception about the relationship between the industrial designer and his finished product that it may not be labouring the point to produce one other example, showing what the designer for the mass-market must do.*

The stockpiling of metals which has now been under way for some time will almost certainly result in less chromium-plating for American cars. But designers who might prefer to omit it will be setting their complex organizations to work devising as many 'distinctive' chromium 'features' as are possible under the new regulations in order to avoid a disastrous drop in sales.

The fact is that the market for what the minority considers an æsthetically beautiful car is so small, at present, that it cannot even take advantage of large scale production practices; in this connection it should be noted that if there is, in some respects, a higher æsthetic level of 'acceptance' in British car design, it is partly because the British car market caters to the minority, while the American market supplies the majority. The following is reprinted from the *New York Herald Tribune* for December 3, 1950:—

> 'At a recent meeting in New York, H. D. Everett, Jr., Director of marketing research of Ford Motor Co., explained that the omission of chrome is like committing commercial suicide.
>
> 'Mr. Everett said that Ford, recognizing that the advocates of less chrome might have a good point, decided to conduct a national consumer poll to find out if people preferred chrome on their cars and if chrome was a major selling point. They asked prospective car buyers what they wanted in a car they intend to buy. They found that safety, visibility, driving ease and other most sensible factors determined car sales.
>
> 'Armed with this information, Ford left off the chrome and experienced a "far from satisfactory" sales year, Mr. Everett reported. They decided to revise the question to ask "What do you think someone else looks at first when he buys a car; not you?" The answer was chrome, a factor which, it was later determined, also was used by those interviewed to choose their car.'

* The ethics involved, the descent into the Market-place with a design which the designer himself could well improve upon, are not the subject of this visual review, and it is usually the designer's contention that he is continually trying to increase mass-acceptance of better design.

Alec Davis

IT IS A GENERALIZATION—but no more misleading than any other generalization—to say that most industrial designers began as architects or as advertising men. The advertising men have, perhaps, an advantage in that their earliest contacts are Business rather than Professional; and although the two outlooks tend nowadays to meet, there is still distinguishable a slight difference between them. Raymond Loewy entered the design world from the commercial-art world, and his ability to talk to business men in their own language is one of the factors contributing to his success. And successful he undoubtedly is—by business standards as well as others.

His background is almost as cosmopolitan as are the origins of the American civilization whose physical manifestations he has, for some years now, helped to shape. Although Loewy was French by birth, his father was a Viennese. He sailed for America, a demobilized captain at the end of World War I, to study engineering. It was an Englishman whom he met on the ship going over who gave him an introduction to Condé Nast, the *Vogue* publisher, and so turned the would-be engineer into a fashion artist. And it was for another Englishman, some years later, that Loewy's first job of product design was done, when he reshaped the Gestetner duplicator for Sigmund Gestetner, who was visiting the United States in 1927.

If H. M. Bateman were fashionable among bright young designers to-day, there would no doubt be an excellent Bateman cartoon of The Man Who Had

interiors and exteriors 1, *recognizably Loewy with its rather heavy but serviceable detailing, this is a recreation car on* The Jeffersonian *New York–Chicago–St. Louis train, designed in* 1947. *A year later, the* SS Lurline, *of the Matson Lines, was described as having 'interior design and exterior styling' by Raymond Loewy Associates. One of the staterooms is shown in* 2. 3, *the Norfolk and Western Railway station at Roanoke, Virginia, designed in* 1950 *by the Associates (architect: Allman Fordyce). Its geometrical precision is the more striking when compared with the Virginian mock-Tudor which it supersedes—which obtrudes at top left of this photograph. A cleanly designed service station at Pasadena, California,* 4, *by the Loewy Organization, in marked contrast to the average visual standard on US highways. Note the effective floodlamps and the trim white seat, marred only by the arty stonework. The shop-front,* 5, *is part of Lord and Taylor's first out-of-town branch* (1941) *at Manhasset, Long Island; in spite of a refreshing sparkle it has a rather self-conscious air. The Lucky store,* 6, *is a self-service super-market at San Leandro, California. Its hangar-like roof spans an uninterrupted floor area. The tall sky-sign seems unnecessarily crude in lettering and scale.*

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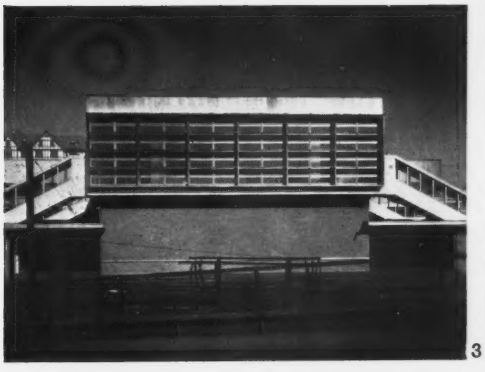
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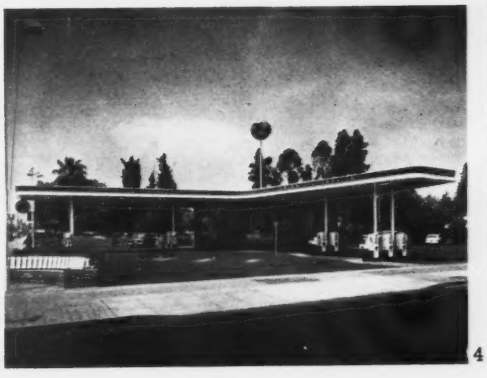
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consumer goods *If every plastics designer handled textures as sensitively as Loewy has done in this razor-case,* 7, *there would be less criticism of the inhumanly smooth uniformity of plastics. The quantity-produced article provides the most obvious outlet for the special skills of the industrial designer—whether the article is as specialized as the chemist's prescription balance,* 8, *or as homely as the pressure cooker,* 9. *They were designed by Raymond Loewy Associates for the Torsion Balance Company and the Ekco Products Company respectively. The glass-topped lid of the balance-case hinges to give access to the scale pans; this design has been credited by name to Clare Hodgman of the Loewy organization. The Ekcomatic pressure cooker is one of several Loewy-designed products which are manufactured in identical or near-identical form in the United States and in Britain. Next is an example of the redesign of machinery in co-operation with a manufacturer's engineering staff: cheque-perforating machines by the Cummins Corporation before,* 10, *and after,* 11. *The refrigerator,* 12, *is one of many models designed by Loewy for Frigidaire. Another Frigidaire product of more distinctive form: a home air-conditioner,* 13 *(which fits into the base of a window, with the unit in the foreground on the inside, and the other more boxy unit on the outside).*

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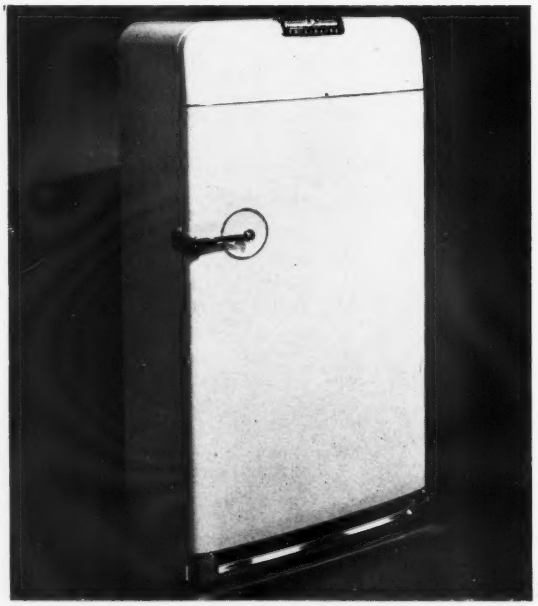
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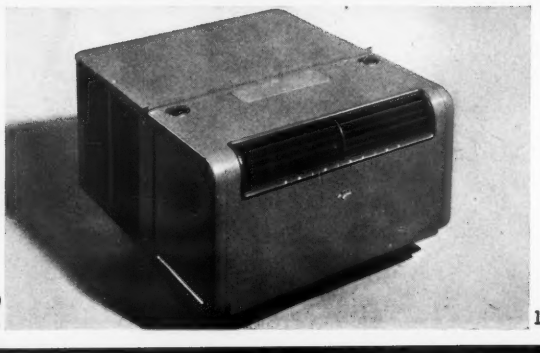
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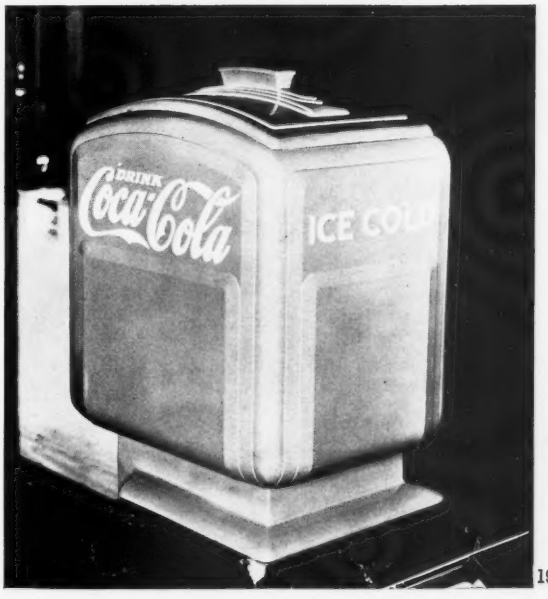

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consumer goods (contd.) *Raymond Loewy has designed packages for products as diverse as beauty preparations and spare parts for farm implements. It is hard to believe that two designs, one so distinguished,* 14, *and one so undistinguished,* 15, *came from the same design organization in the same year* (1948). *Loewy would no doubt argue that each was right for its market. The* 1947 *Studebaker,* 16, *was less chrome-spangled than most American cars of that year. But the later design,* 17, *with its 'bomb-aimer's nose,' suggests that the pressure of change-for-sales-promotion-sake has driven Loewy to a design that has only the dubious merit of being different from the old. No comment could be more apt than this phrase from the manufacturers' own advertising copy: 'Most people say it's a car so startling, they half expect to see it take off and fly!' A model of restraint, in comparison, is the Hillman,* 18, *ambiguously described by* Interiors (*June,* 1950) *as 'Mr. Loewy's foreign car.' In spite or because of its restrained lines (more restrained in profile, one must admit, than in front view) the Minx sells well in Britain and in overseas countries, including the States. A glance at this assemblage of frozen clichés,* 19, *suggests a typical product of a typical slick American stylist. It is a 'before': and* 20 *is the Loewy 'after' of the same object. Designed* 1947–8.

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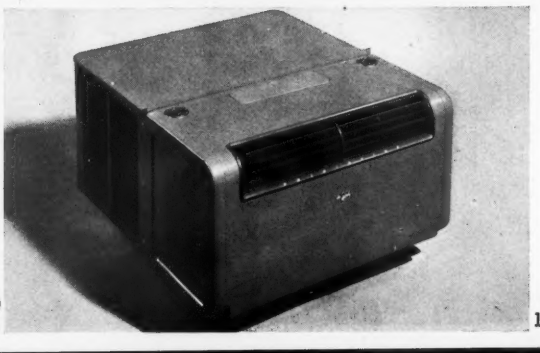
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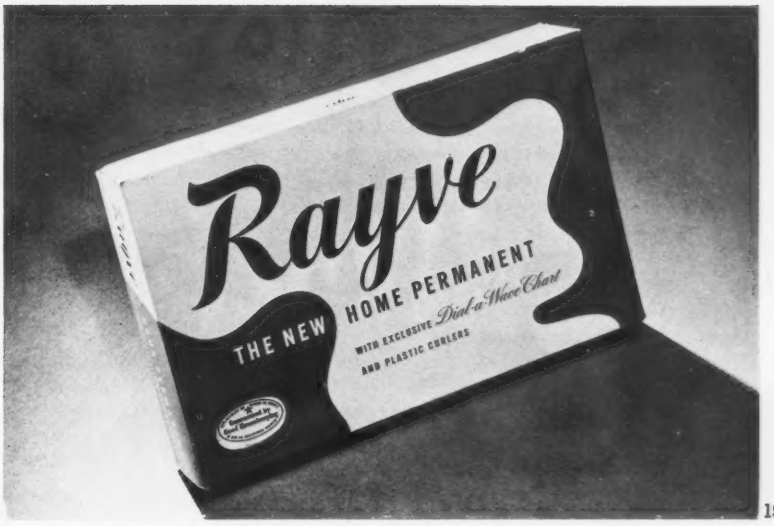

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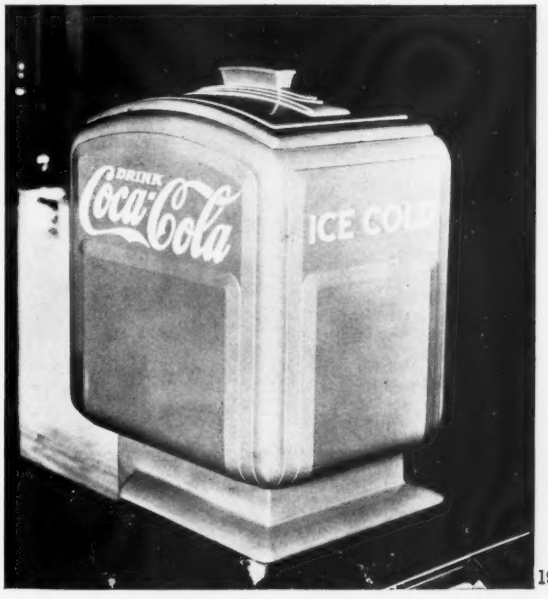

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transport *Loewy-designed products frequently illustrate 'the refinement of known forms' which is a legitimate function of the industrial designer. Corrugated aluminium panelling, used in his much photographed buses,* 21, *for the Greyhound Corporation, was employed by Junkers aircraft from about* 1919 *onwards,* 22*: perhaps it is no more beautiful now. But Loewy's design compares favourably with the many British coaches which have imitatively acquired trimmings in the form of corrugations, ribs or parallel lines that serve* no *structural purpose; one of the less objectionable of these is shown in* 23*. The American press has given widespread publicity to Greyhound's* Scenicruiser, 24, *styled by A. Baker Barnhart, of Raymond Loewy Associates. Its ancestry can be traced back through the BOAC airport bus of* 1946, 25, *to the London–Scotland coach of* 1931, 26. *'Streamlining' the locomotive makes only a small difference to the wind-resistance of the train as a whole—and in any case it is difficult to streamline without adding weight and reducing the accessibility of vital parts. Loewy's engines for the Pennsylvania Railroad have become progressively less streamlined, from the original K4S,* 27 *right, through the S–*1 *of* 1937–9, 28, *to the T–*1 *series of* 1942–5, 29. *In the T–*1 *rivets have reappeared in some quantity.*

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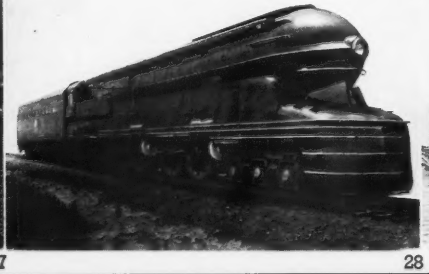

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Never Heard of Raymond Loewy. Whether you like the work of Loewy or loathe it, you can scarcely fail to hear it discussed, once your design education goes beyond the elementary or Teapot Spout stage. A witty (and regrettably anonymous) writer in *Time*[1] said of Loewy that: 'Everything he does calls attention, with skilled showmanship, to his work, so that observers at times get the strange feeling that he too is a design—by Loewy, of course.' He has designed himself into a big enough and picturesque enough figure to be interviewed and written-up in the mass-circulation American magazines as well as the more specialized journals of architecture and design. But, because he has an almost Shavian knack of saying the sort of things he is expected to say, the quotations which they publish should, I think, be taken with a pinch of salt. We can take more seriously a paper which Loewy wrote in 1941 for the Royal Society of Arts.[2] In this he said, *inter alia*, that the work of an

> industrial designer is allied to that of a naval architect, a decorator, a psychologist, an artist, a typographer, a mechanical engineer, an electrical engineer, an authority on aerodynamics, a chemist, a physicist, an expert in merchandizing, a salesman, and, with all, a business man.

And, further,

> because design is a sales stimulant it can never be completely dissociated from its commercial aspects. No industrial designer will claim that he creates, as an artist does, to satisfy only his æsthetic sense. If he is to stay in business he must develop his scope, his knowledge of materials and processes so that this æsthetic sense will never have to give way to pure commercialism.

These are the views of Loewy the man; but comparison of the man's faith and the designer's works is made difficult by the fact that Loewy the designer is an organization. It is to *Raymond Loewy Associates*, not to Mr. Loewy alone, that recent designs have been attributed (indeed, in some cases, published credits refer by name to one of the associates other than Loewy); and any assessment of Loewy's work must be an assessment of this design team's work. The team is by far the largest organization of consultant industrial designers working together anywhere. The latest available figure gives its strength as 250, of whom 45 are described as 'administrative and non-productive.' It includes employed architects, model-makers, and liaison executives as well as industrial designers proper, and it is split over five offices—in New York, Chicago, South Bend, Los Angeles, and London (Eng.).

However, the distinction between Mr. Loewy's work and the Loewy team's work need not, perhaps, be over-emphatic; 'all of his designers think so much like him that'—according to an admiring rival, quoted in *Time*—' "If you meet any one of them you meet Loewy." ' This view gains some support from the absence of any distinctively British character in the work of Loewy's London office.

It may not be generally realized that there is a branch of the Loewy organization on this side of the Atlantic, but there was before the war, and there has been again for the last few years. Its work has recently had some publicity, and no doubt would have had more but for two conditions: (*a*) the reluctance of the more conservative British firms to acknowledge publicly the services of *any* consultant designer; (*b*) the long delay, in post-war Britain, in putting a new design into production and launching it on the market. The Otto stove is one of the best-remembered pre-war products of Loewy's London office; a 'repeat order' from Allied Ironfounders has recently led to Loewy's styling the Raymond cooker. Other firms in Britain for whom Raymond Loewy Associates have done work of one sort or another, before or since the war, include J. Lyons, Avery Scales, Philco, GEC, Easiwork, Hillman and Commer, Gestetner, Lever. The last one may be regarded as the result of a world-wide tie-up between the Lever organization and Loewy, which has led to Loewy Associates working as industrial designers for Lever companies everywhere.

One thing that is not clear (and, at this distance in time, it cannot be) is how Raymond Loewy grew from the one-man design consultant into the large organization which is his to-day; an organization responsible for the appearance-design, if not for the complete design, of many million dollars' worth of merchandise every year. It is evident that the fees paid to him by manufacturers have, in the opinion of those manufacturers, been fees well spent; they come back for more, and some of them, especially in the States, are proud to give design credit to Loewy in the advertisements for their products. The work done must also have satisfied Loewy's own standards. It is, I think, undeniable that these are not the highest possible standards, in terms of pure æsthetics; but it is equally undeniable that they are higher than the manufacturers' standards, which would presumably have prevailed if Loewy had not come on to the scene. For it must be emphasized that the Loewy organization did not grow by putting other designers, better or worse, out of business; it grew by meeting a demand whose existence had not been met before. The tendency towards over-specialization which is inherent in modern industry has made a place for the all-round consultant designer—even if it is not so large nor so important a place as he has sometimes claimed for himself. In making industry aware of this fact, the Loewy phenomenon has been beneficial in its effect.

An aspect of the consultant designer's work which should ensure it a place in the British economy especially is the help that it can give to smaller manufacturers in meeting the competition of the industrial colossus. The small company which cannot economically employ a full-time designer can (in theory at least) afford to use the services of a consultant on a fee basis, when it needs them. An example of this theory working in practice is provided by the Studebaker car firm, for whom 'Raymond Loewy demonstrated with great clarity the one way open to the small manufacturer: design leadership. By putting out a car that incorporated a number of distinct design improvements, . . . Studebaker managed to get enough word-of-mouth publicity to make up for the difference between its advertising budget and that of the larger producers. More significantly, it established itself as a distinct entity in the public mind in the only way it could—through the appearance of the product itself.'[3]

While the Studebaker example shows one of the merits of a consultant design organization such as

[1] *Time*, October 31, 1949.

[2] Read, in Loewy's absence, by John Gloag; published in the *Journal of the Royal Society of Arts* and as an appendix to *Industrial Art Explained*, by John Gloag (Allen & Unwin).

[3] George Nelson, 'Business and the Industrial Designer,' *Fortune*, July, 1949; *Design*, London, November, 1949.

Loewy's, it could also be used, at this date, to illustrate one of its weaknesses: for whatever one may think of the Studebaker design that was current when those words were written, many critics would agree that the present design—introduced a few months afterwards—is, in appearance, inferior. To the impartial observer it must seem that the change was made less for the sake of improvement than for the sake of change—to stimulate sales by making the earlier cars look outmoded, while, in fact, they were still functionally sound. Such catch-dollar 'styling' is effect rather than cause—the effect of the scrap-and-buy-new gospel of American industry, dominated as it is by the super-salesman; but such 'styling' (in the sense of an exaggerated attention to the superficial aspects of design, a 'prettying-up' of products without much regard to their intrinsic merit) is a ready tool to the super-salesman's hand. The validity of his gospel is questionable on material grounds as well as moral ones at a time when shortages are more noticeable than surpluses in world economy.

It must, however, be admitted that 'styling,' in this sense, is less evident in Loewy's work than in his imitators'. The worst result of his commercial success is something for which he can hardly be held blameworthy: the encouragement which it has given to a host of lesser Loewys—designers who lack his ability in design and, generally, lack his business acumen too. They are not confined to the United States, and wherever they appear their emphasis on the superficial and their disregard for fundamentals have done harm to the whole movement for better design in industry.

The observer on this side of the Atlantic is inevitably tempted to draw comparisons between Loewy (and his imitators) and the Modern Movement, as epitomized in the work of the *Bauhaus* in the early 1930's and of ex-*Bauhaus* teachers and students since. Any comparison is misleading; though there are resemblances in the end-products, and though both have, at times, attracted charlatans, the two approaches to design are basically dissimilar. The Modern Movement was an affair of the spirit and the intellect, while Loewy's approach to design has more than once been described as sensual. Its results have gained wider popularity almost inevitably, since the common man feels and only the uncommon man thinks.

Raymond Loewy's work has less in common with the *Bauhaus* spirit than with the advertisement illustrators, the strip cartoonists and the Hollywood film-producers, all of whom have reached a high level of technical accomplishment in their own limited spheres. He has glamourized the common product in the same way that they have glamourized the common man. Sometimes, of course, the glamour is as synthetic as glycerine tears, but sometimes it is the glamour that resides in industrial products for those who see them with an unsophisticated eye—the eye of a small boy who stands in delight to watch the lights of an express train streaking across the countryside by night. (It is worth noting, in this context, that an American industrial designer once illuminated a railway engine's wheels to simplify inspection—and then decided that the lights should be kept on during night journeys 'because of the dramatically decorative value.')[4]

It has already been mentioned that Loewy came into industrial design from commercial art; he and other designers in both these fields are perhaps the nearest equivalent, in our complex civilization, of the popular artists of earlier ages. Their work satisfies one half of Noel Carrington's definition of popular art as 'art practised by artists of the people for the enjoyment of the people.' Artists everywhere have become separated from the people, but comic strips and coloured advertisements in the *Saturday Evening Post* and the lines of a typical Loewy product are all 'for the enjoyment of the people.' Their creators are no longer unselfconscious, but they work for a public that is: the people, for whose enjoyment the popular arts always have been practised and the fine arts, in recent years especially, have not.

[4] *Advertising and Selling*, September, 1939. The designer concerned was Henry Dreyfuss.

questionnaire submitted to Raymond Loewy Associates on methods of organizing jobs

To what extent is Raymond Loewy personally concerned with all the jobs done by Raymond Loewy Associates (a) *in America* (b) *in England?*

In all cases, my associates and myself hold ourselves responsible to see that our design staff clearly understands my design philosophy and adheres faithfully to it—in America as well as in England or anywhere else. Constant checking by myself and all partners ensures the consistency of our design approach and the correctness of the solution.

How many of the Associates are partners, and how many are employees?

Five partners, approximately 250 employees.

Are fixed salaries paid or are individuals paid according to the value of the jobs on which they work?

Fixed salaries are paid, proportional to the responsibilities of the individual in the department, such as manager, assistant manager, etc.

Do clients pay a retainer, or a retainer plus royalties, or fees for individual jobs; or is a combination of these systems used?

All these systems are used, as well as combinations of them.

Which clients have stayed with the Associates longest on a retainer basis?

Pennsylvania Railroad	...	17 years
Greyhound Bus System	...	16 years
Studebaker	...	15½ years
General Motors	...	15 years

Is one individual responsible for seeing a particular design through from beginning to end?

Yes. However, a design team may work under his direction and the team members may vary.

Where a client commissions a job which involves several different forms of design—e.g., architecture, product design, and packaging—are these forms the concern of different people: do the members of the firm work as specialists in particular fields of design?*

Yes, they work as specialists in particular fields. However, we like to rotate them among other design divisions whenever possible and sensible.

Does the firm undertake its own market research to feel the way for new designs, or is this work undertaken by (a) *clients or* (b) *their advertising agents; or does the practice vary?*

The practice varies.

Are all your clients manufacturers, retailers, etc., or is some of the work placed with you by advertising agents?

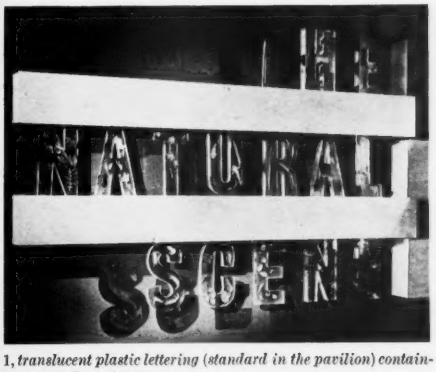
In some cases the work is placed by the advertising division on behalf of the client. It is the client who ultimately bears the expenses.

* Although the Associates include architectural designers, the design of exteriors is always executed by a registered architect, in compliance with the laws of the various States.

EXHIBITIONS

BRINGING THE COUNTRY TO TOWN

Among the most successful pieces of display work at the South Bank exhibition were The Natural Scene *and* The Country; *in addition, the problems they presented to the display artist were particularly complex. The following notes by F. H. K. Henrion describe the way in which they were overcome.* In designing 'The



1, translucent plastic lettering (standard in the pavilion) containing natural specimens.

Natural Scene' which was to deal with Britain's fauna and flora, and 'The Country,' which was to show all aspects of British agriculture, almost insuperable problems seemed to arise at the beginning. First of all, how could one get a feeling of nature and wild life into a small brick building, and a feeling of the open country and its activities into the limited space of a consciously man-made exhibition? To answer these questions I had, at this early stage, the help of Gordon Cullen. Thoughts were developed and final conclusions arrived at in consultation with him. It was unfortunate that pressure of work prevented him from continuing his collaboration.

In considering and trying, it soon became clear that one could only hope to succeed by taking exhibits out of the natural plane and transposing them, with discretion, on to that of a higher and more imaginative reality. The painter and sculptor might be able to achieve what photographs could not. Once this attack had been decided upon, it only remained to find the right mixture of factual reporting and imaginative interpretation. So now the most important general motifs had to be determined which, by means of their size and perhaps their visual quality, would remain fixed in the memories of all visitors. These motifs were:

First the wind tower, symbolizing four elements—sun, moon, wind, water.

Second the large white plaster tree in The Natural Scene, measuring 9 feet in diameter with its branches pressing against the four side walls and its trunk growing right against the ceiling; it symbolized organic growth and stood on a live woodland floor on which, at the opening of the exhibition, were planted some 5,000 lilies-of-the-valley with a carefully landscaped stream running through it.

In order to stimulate the imagination, it was essential that the tree should not be realistic. That is why it was made of white plaster. If this helped to let it appear as a symbol, how could it then be 'married' with the real woodland floor. To achieve this I relied entirely on artificial ivy, 3, growing up the white bark. Another link between realism and imagination was the display of nine pictures of birds flashing up one after another in synchronization with their respective voices so that simultaneously eye and ear could absorb the ideas of tree and bird.

Third. In the gallery on the first floor facing the long outer wall of glass was a woven wall-hanging by Michael O'Connell 180 feet long, illustrating the variety of British farming in seven examples. The use of photographs in illustrating these farms was purposely discarded and Mr. O'Connell went all over the country to study the various landscapes. Furthermore, I had exact statistics done for each farm as to acreage, crop variety, livestock, etc., so that in spite of the highly unrealistic treatment, there was a basis of

2, mural by L. Rosoman with sculpture by F. E. McWilliam which overlooks the main area of the pavilion housed in the Dutch barn.

hard fact in the tapestry for a serious student wishing to study it.

Fourth. To display rural crafts instead of just showing exhibits of various crafts, different artists were commissioned to study each rural craft, its media and techniques, and asked to illustrate the craftsmen in their activities using each time the craft's particular medium—as, for instance, the basket-maker at work being made of wicker; the thatcher of thatch, and so on. Activities in the country, month by month, were shown by twelve rotating paintings in a roundabout structure, interpreted by Kempster and Evans.

3, base of the plaster tree seen through the case of live butterflies.

Finally. The main theme of the Dutch Barn section was the four seasons in four murals with four sculptures. It took a long time to find a satisfactory integration of the four McWilliam sculptures with the background by Rosoman, 2. In order to create continuity with a certain rhythm, both for the O'Connell wall-hanging on the back and the Rosoman murals, in front of the wall between Dutch Barn and glass

4, air-conditioned plant cases and refrigerated showcases (right) for display of perishable goods.

gallery the free-standing wavy wall was designed (it was straight on the architect's first plan). Great care was taken that the paintings should stimulate memories and associations of colour and shapes of the countryside in the four seasons rather than depict anything in particular. As the sculptures had to be fixed to 30 feet vertical stanchions I felt that McWilliam's peculiar 'bellyless' human figures would be particularly suitable.

5, the tree seen from the intermediate platform.

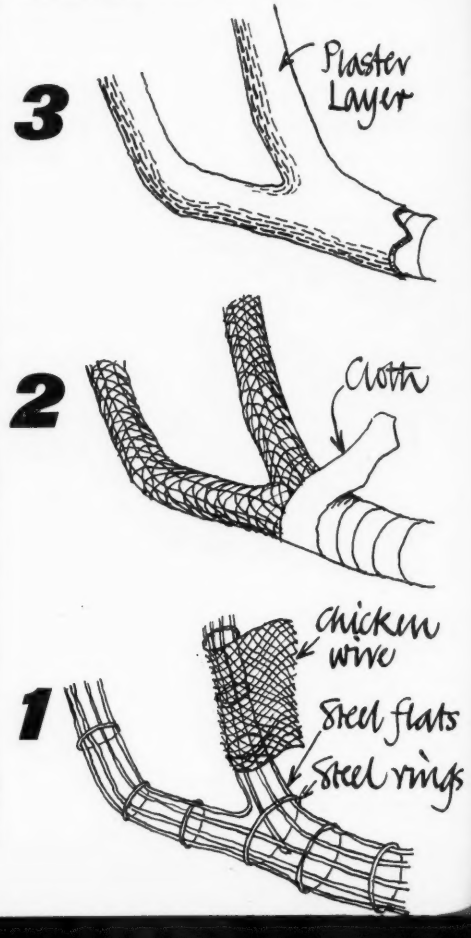
The other main problem which the Country Pavilion presented was that a great many live exhibits had to be shown ranging from snakes, butterflies and mice to horses and cows and to specially grown plants from various research stations. Now, it was almost impossible to design anything round organic exhibits; each had different servicing problems which, as they accumulated, turned out to involve the trickiest jobs of administration and planning. For instance, in order to show fruit trees, cereals and vegetables throughout five months—in conditions which nobody could exactly foresee—2,000 plants were grown in specially designed aluminium containers, some as long as two years ago, and most complicated rosters, itineraries and servicing arrangements had to be made. 500 grasses and clovers were specially grown in Aberystwyth, but had to be brought to Cambridge in February in order to be sent to the South Bank in May and June; it was essential to grow them in Wales, yet the journey would have upset the plants too much when they were fully grown; therefore they had to be transferred to Cambridge to settle down and be ready for the relatively short transit to London.

An air-conditioning plant had to be installed for all the livestock, trees, etc. Then, a day before the opening a complication arose. I was warned by scientists who put in specially forced strawberry plants, that unless the air-conditioning was turned off, all these exhibits would wither and die within a couple of hours. When the air-conditioning was switched off, an SOS came from the Poultry Manager: over 100 heads of poultry and chicks would face certain death. So I had quickly to block all air ducts in the Plant section. The next unpleasant surprise was that, when the engineers turned on the grain elevator, the noise caused all the chickens to faint and I was warned that they would not stand another similar shock. The butterflies posed another problem. In order to keep the 8 feet by 3 feet window full with live butterflies, a contract had to be placed with Britain's only butterfly farm for 12,000 butterflies and moths for five months. But butterflies can only feed on certain wild flowers, and so another contract had to be placed, to have a succession of wild flowers in bloom, acceptable to our exhibition lepidoptera. 160 fishes were shown in seven aquaria, requiring special cooling and pumping apparatus. When the electrician, mending a fuse, switched off the plant and forgot to connect it again, the result was that all the fish died within a few hours.

All the livestock, although it stayed on the site for only one week, had to be exercised daily before exhibition hours, and a special contract for a daily horse-box had to be placed to take the pedigree animals across Westminster Bridge to Hyde Park and back again for an early walk.

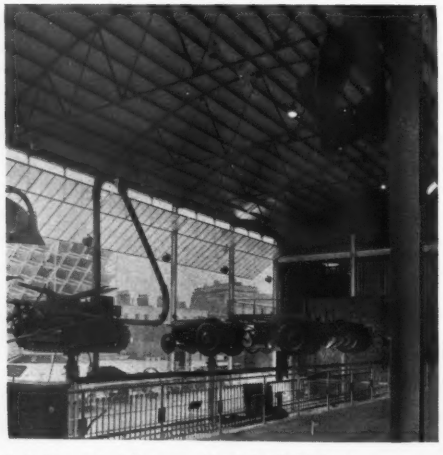
As nobody could foretell how quickly the plants would grow and how long they

6, plasterers at work on the branches top and on the facing page the finished product.



would live, I had to design specially adjustable furniture with 'kee clamps' so that if a plant in a front row grew faster than one in the back, the latter could be raised if necessary. In the Forestry section in boxes of their respective woods, were displayed five types of trees—two-year-old and six-year-old seedlings. As they got no daylight at all, a special mixture of lamps had to be installed to replace sunlight and ensure growth. The result was that they grew at twice their normal rate and did so well that they had to be replaced. The tallest trees had already grown through the ceilings of their boxes within six weeks of the opening of the Festival.

Finally, it was particularly difficult to introduce livestock into the exhibition because the agricultural community is so exceedingly tradition-bound. In one instance, however, that of the ducks, I designed a special island within a large



7, looking out of the open side of the Dutch barn.

aquarium and it was, to my surprise, approved by all the experts—and there were very many of them. Nevertheless, within the first week, one duck broke its leg, another its wing, and I had to adjust the structure in the light of this newly gained experience.

Of course, there has been a great amount of criticism from various experts all along, but the highest praise I have had came without doubt from the two or three families of sparrows who built their nests in The Natural Scene section.

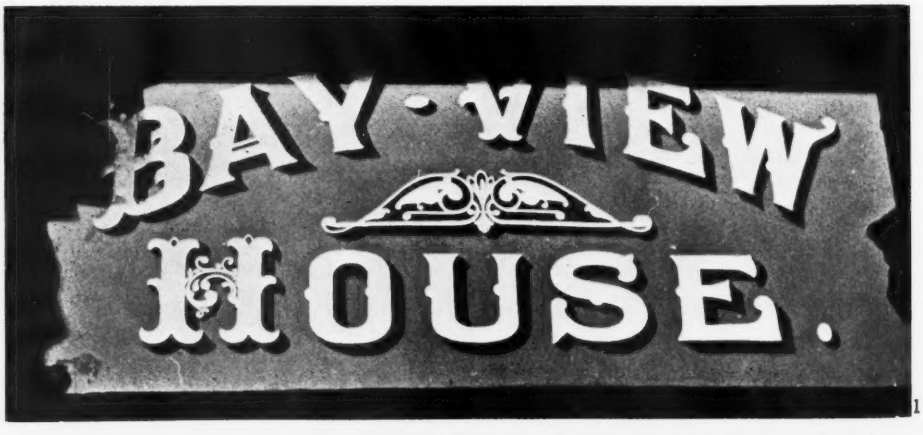
LETTERING

THE SUBTLETIES OF BADNESS

It is sometimes said that a taste for Victoriana debauches the eye—that those who indulge it end by liking everything indiscriminately. But this is not true, or at any rate need not

be true. In point of fact, the lawlessness of Victorian design makes it an ideal training ground for the eye: since there are no rules, it is no use the eye trying to hand the job of assessment on to the intellect, which can only assess when there are rules which it can apply.

To distinguish between good Victorian design and bad Victorian design is not too hard. It is when we begin to try to distinguish between the not good and the worse, when we are dealing with the subtleties of badness, that the fun starts. Take the two Scarborough boarding-house signs reproduced below. (As the photograph above shows, they are side by side under a Georgian double porch.) At first glance they may look pretty much of a muchness. But look again, and an appreciable difference, a difference of quality, begins to emerge. Probably, since we are concerned with degrees of badness, this will make itself felt more as the absence of something from 2 than as its positive presence in 1. But that something? Character's the name. Never an easy thing to analyse, of course. In the present case the spacing of the lettering has a good deal to do with the more hopeless badness of 2, but its actual form has even more. In fact the lettering in 2 is a poor flabby affair by any standard, its weakness coming to a head, as it were, in the splay-footed H of House. Not that the lettering of 1 is anything to write home about, but it has more character, and the bold and bad are more readily forgiven their sins than the weak and woolly. A.H.



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PAINTING

SIX DECADES

Exhibitions illustrating the history of art are frequent: exhibitions illustrating the history of taste are rare events. The exhibition entitled *Ten Decades of British Taste*, organized by the Institute of Contemporary Arts under the auspices of the Arts Council, was an

exceptionally good example of the latter category, and it seemed worth while to put some of it on permanent record. For this purpose the ten decades have been reduced to six. Each painting is accompanied by a relevant quotation from the catalogue; in two cases George Moore's *Modern Painters* (apparently overlooked by the compilers) has been drawn on too.

1851-1860

William Shakespere BURTON (1824–1916)
4 *A Wounded Cavalier*
Lent by the Guildhall Art Gallery. Oil, 35×41

We may regret that the story is somewhat unintelligible. That the artist has introduced a cobweb and a butterfly upon the broken blade —where the one was not likely to have been and the other could not have been. But the picture is a production of great power and originality. The painter is secure of fame hereafter. (Academy Review, *Art Journal*, 1856.)

1861-1870

Frederick SANDYS (1832–1904)
50 *Medea*
Lent by the City Museum and Art Gallery, Birmingham. Oil, 24½×18¼

Mr. Sandys' picture of *Medea* is well enough known by this time, wherever there is any serious knowledge of art. . . . Like Coriolanus, the painter might say if he would, that it is his to banish the judges, his to reject the 'common cry' of academics. For this, beyond all doubt, is as yet his masterpiece . . . the fatal figure of Medea pauses a little on the funereal verge of the wood of death, in act to pour a bloodlike liquid into the soft hollow of a shell. (Swinburne, *Academy Criticism*, 1868.)

Sir Lawrence ALMA-TADEMA (1836–1912)
27 *The Pyrrhic Dance*
Lent by the Guildhall Art Gallery. Oil, 16×32

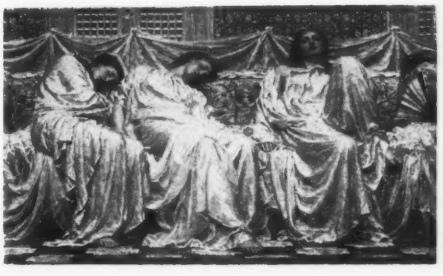
. . . the little picture called *The Pyrrhic Dance*, of which the general effect was exactly like a microscopic view of a small detachment of black-beetles in search of a dead rat. (Ruskin, *Classic Schools of Painting*, 1878.)

1871-1880

Lady BUTLER (Elizabeth Southerden Thompson) (1850–1933)
58 *The Remnants of an Army*
Lent by the Tate Gallery. Oil, 52×92

Mrs. Elizabeth Butler, the national battle painter of whom we are all so proud. (*Art Journal*, 1879.)

1881-1890



Albert MOORE (1841–1893)
90 *The Dreamers*
Lent by the City Museum and Art Gallery, Birmingham. Oil, 27×47

Very pretty, but sublimated café painting and no more. (Rossetti, quoted by Comyns Carr, *Some Eminent Victorians.*)

No difference exists even in Academic circles as to the merits of Mr. Albert Moore's work. Many Academicians will freely acknowledge that his non-election is a very grave scandal; they will tell you that they have done everything to get him elected, and have given up the task in despair. Mr. Whistler and Mr. Albert Moore, the two greatest artists living in England, will never be elected Academicians. (George Moore, *Modern Painters*, 1893.)

Walter Dendy SADLER (1854–1923)
98 *Thursday*
Lent by the Tate Gallery. Oil, 33½×55

So rich in humour as well as in carefully studied illustration of costume, manner and custom, while the art employed is so sound and original that it will reward repeated visits. (*Athenæum* on an exhibition of Sadler's work, 1895.)

1891-1900

John Singer SARGENT (1856–1925)
128 *Portrait of a Lady*
Lent by the Tate Gallery. Oil, 72×38

He's the biggest force in art. He's a giant. (C. Lewis Hind, *The Daily Chronicle*, 1910.)

For it is very real, and just the reality that ladies like, reality without grossness; in other

words, without criticism. So Mr. Sargent gets his public, as the saying goes, 'all round.' He gets the ladies, because it realizes the ideal they have formed of themselves; he gets the artists, because it is the realization of the pictorial ideals of the present day. . . . But when painters are pursuing new ideals, when all that constitutes the appearance of our day has changed, I fear that many will turn with a shudder from its cold, material accomplishment. (George Moore, ibid.)

1901-1910

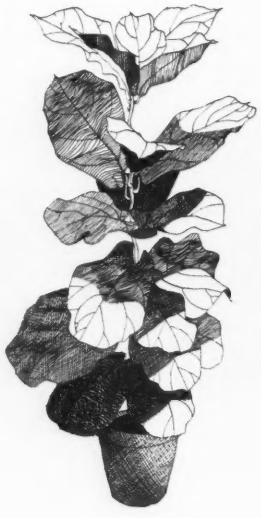
Edgar BUNDY, A.R.A. (1862–1922)
141 *The Morning of Sedgemoor* (1905)
Lent by the Tate Gallery. Oil, $59\frac{1}{2} \times 49\frac{1}{2}$
The surest sign of health in the Academy is . . . that there are still painters with the courage and ability to tackle such compositions as Mr. Edgar Bundy's Shakespearean performance, or Mr. Gow's scene in the House of Commons, or Mr. Seymour Lucas's picture of a Cabinet Council under Queen Elizabeth. (Walter Sickert, *The English Review*, 1912.)

INDOOR PLANTS

FICUS PANDURATA

Ficus pandurata (*or* F. lyrata) *is of the genus Fig, which includes the old and esteemed fruit tree and such popular room plants as the India-rubber plant and that attractive small-leaved creeper* Ficus pumila. The most noticeable feature of this plant is the shape of its very large leaves, which has earned for it the names of the violin-case fig, the fiddle-leaved rubber plant or the lyre fig.

The culture and care of this house plant are simple. Conveniently it prefers shade to sunlight. However, it should be placed so that it does receive its fair share of reflected light and be, of course, out of draughts. It prefers to be slightly pot-bound, but if you must re-pot choose only the next size up. The leaves should be sponged and kept clean of dust as often as



need be, and the plant watered three times a week in summer and only very moderately in winter. Propagation can be made from cuttings in spring or from 'eyes,' a length of stem containing a bud, in a potting mixture of two parts loam, one part sharp sand, one part leaf mould and a pinch of bonemeal.

The fiddle-case fig, with its huge, finely shaped scabrous leaves, is very much more attractive than its cousin the rubber plant, whose sleek, glossy appearance is just a little too synthetic to my taste. *F. pandurata* was used fairly extensively at the South Bank Exhibition, where it graced the Lion and Unicorn and Homes and Gardens pavilions and the Riverside Restaurant. It also even survived the atmosphere of the Press Club. It is, therefore, tough and fairly hardy. I have heard that a particularly fine specimen, as tall as a tree, grows in the courtyard of the Pan-American Union in Washington. It must be worth seeing.

H. F. Clark

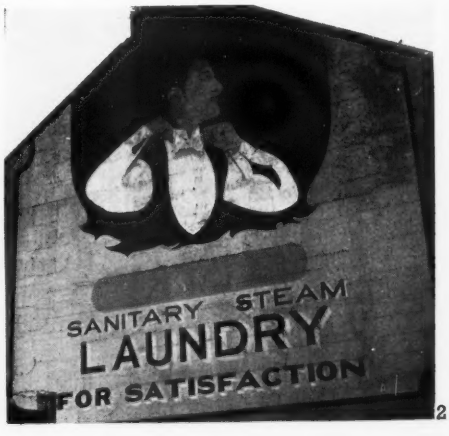
TOWNSCAPE

PROFITING BY YOUR WALLS

Enough tears have been shed over the fact that in this age of advertising people will try to profit by their walls. It is time to see whether their private profit cannot be combined with our public gain—whether we

1

can't profit æsthetically from what profits them financially. Of course we can. In fact—as we must admit as soon as we rid ourselves of *a priori* theories based on a belief in the inherent wickedness of advertising—we often do. Where architecture leaves off, advertising may step in to fill what would otherwise be an intolerable blank. One place where architecture nearly always does leave off is the end wall, and photographs 1 to 3 show end walls where advertising has stepped in to good effect. The French example in 1 is



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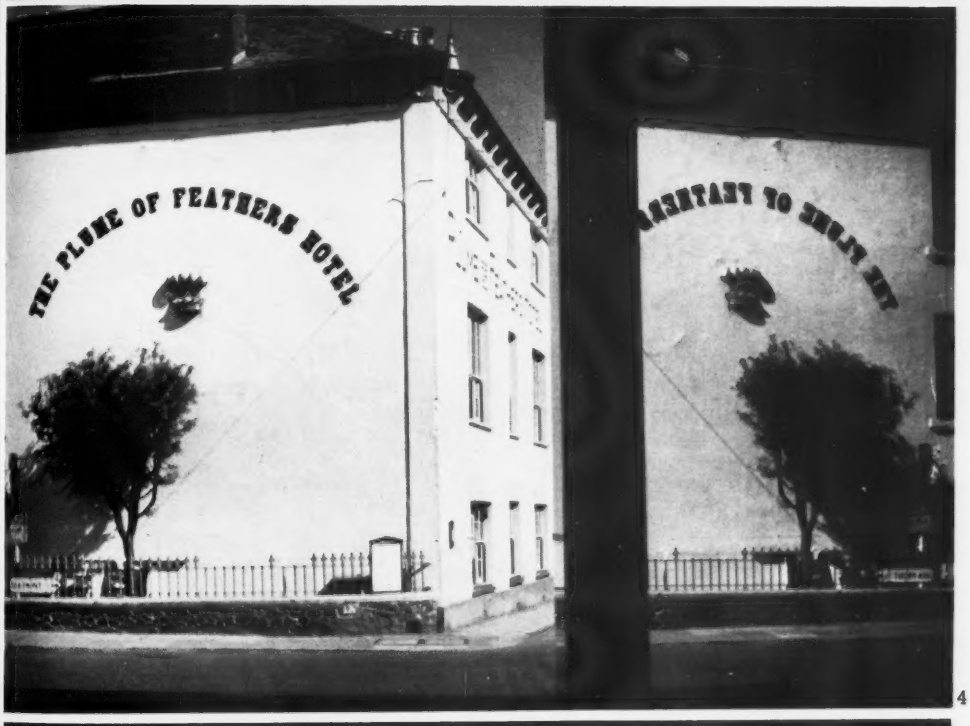
particularly fine, on account of its bold scale and architectural feeling. 2 is a true work of popular art, showing a nice appreciation of the possibilities of the space at his disposal on the part of its sign-writer creator; in 3 even the unequal lettering seems somehow to contribute to the excellence of the general effect and its crisp black-and-whiteness is in the right tradition for the locality. 4 shows the thing done in the sophisticated, regency way, and for sparkle and elegance it could hardly be bettered. Looking round the corner, however, 5 is an even better example of how to throw a wall away.

3



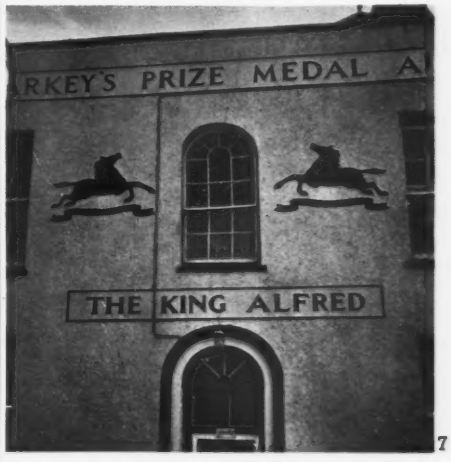
4

5

With 6 we leave end walls for painted signs in direct relationship to the structural elements of a main front. This particular example is admirable: its shape, its placing, and the spacing of its lettering

6

combine to make it an integral part of the pattern of the façade. That this state of affairs isn't altogether as easy of achievement as might appear, the remaining



7

photograph, 7, reminds us: in it the long ribbon-like signs break up the rhythm of the façade in the crudest way possible. **R.M.**

WORLD

CENTRAL LABORATORY AT SARPSBORG, NORWAY

In addition to a factory laboratory the building houses an experimental factory for cellulose and silk-cellulose. Situated on steeply sloping ground it has four storeys on one side and two on the other. The lower floors contain the experimental factory and store-rooms, while on the second floor is the central hall (illustrated on the next page) with staircase through it to the top floor, round three sides of which the various laboratories are grouped, to the north, east and west. On the fourth side are the offices, and library. A canteen

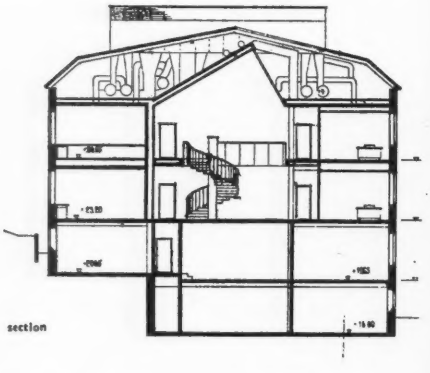
with an outside balcony forms an extension to the hall.

The outer walls of the building are brick, and the structure is supported by reinforced concrete columns, with cavity walls as panel infilling. All pipes and cables are led through this cavity. The floors are reinforced concrete surfaced with cork-

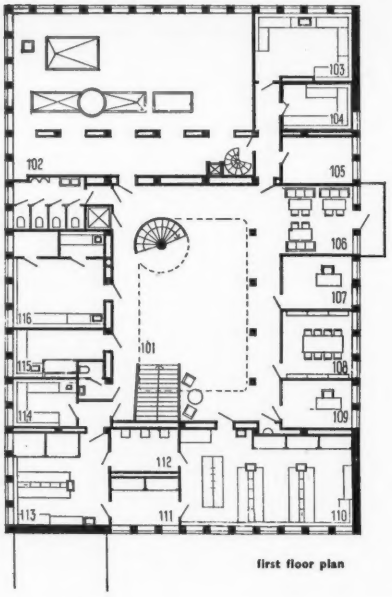
parquet in most of the laboratories and offices.

There are two hot-water heating systems, one for the ground floor which has ordinary radiators while the two laboratories—on the first and second floors—have ceiling panel heating.

In addition to hot and cold water, high-pressure vapour, compressed air, suction, and in some places also distilled water and an acid-proof outlet are provided for laboratory purposes. The ventilation arrangements, of utmost importance in a



laboratory of this kind, can best be illustrated by the fact that there are 37 ventilation units in all with a joint capacity of about 2,300 cu. feet per hour of which no fewer than 31 are installed in the loft. These units also serve partly as suction devices from the outlet. In all there are 26 centrifugal ventilators in acid-proof fittings and rubberized fan-housings with fan blades in acid-proof steel, and in



first floor plan

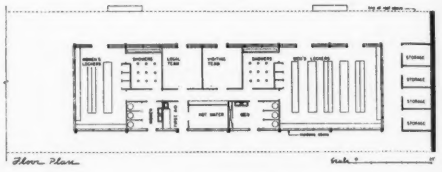
addition two outlet ventilators of ordinary type. The building is also equipped with two atmospheric units for maintaining constant temperature and humidity, as well as two units for constant temperature in specific rooms. The units are thermostatically controlled and are provided with both heating and cooling batteries, the latter being connected to the central cooling unit in the cellar.

Where there is a danger of corrosive gases, both conduits and units are made from acid-proof materials, partly of glazed stone material, and partly of sheet-metal lined with rubber. The air-ducts are constructed entirely of wood.

The architects are Arne Pedersen and Reidar Lund.

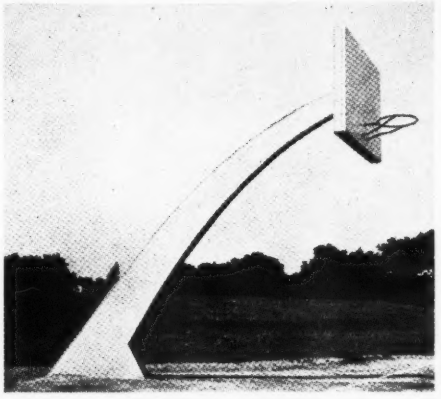
SPORTS PAVILION AT GENEVA

This sports pavilion with facilities for 113 men and 50 women serves two basket-ball fields and an outdoor track, and is the first unit of a comprehensive public sports ground which will later include another basket-ball and other playing fields, a stadium, an indoor gymnasium-meeting hall, a circular restaurant and four tennis

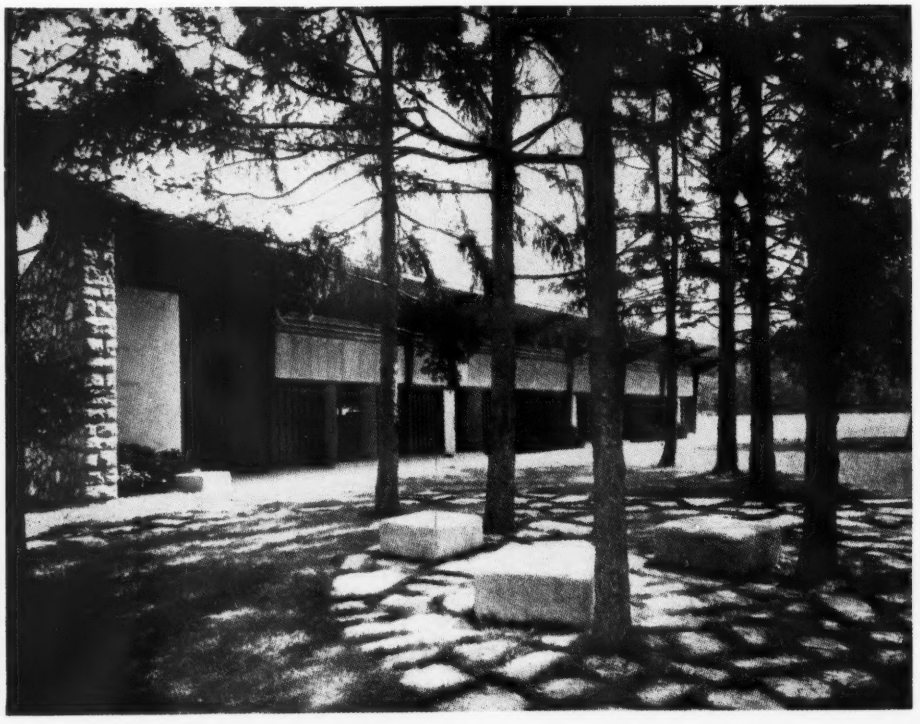


courts. The site is a wooded point of land in a sharp bend of the River Arve which flows through a residential section of Geneva.

The pavilion shown from the south in the photograph below, at present half its



eventual size, is rectangular in plan and stands in what will be the middle of the sports ground. The construction consists of



a series of sloping prefabricated wooden frames spanning the 28 feet of interior space and exposed on the exterior, see

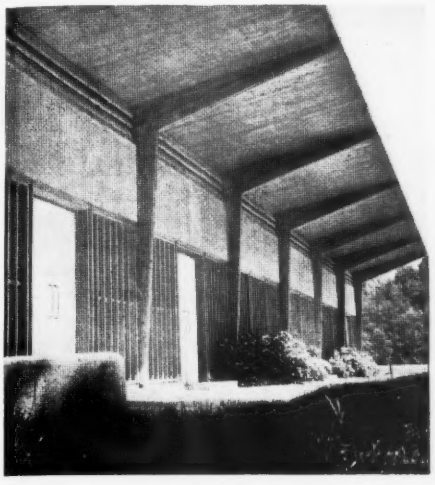


photo above. The enclosing walls are of asbestos-cement panels and wood frame backed with translucent glass. The pavilion is heated by a forced warm-air system. The architects, Georges Brera and Paul Waltenspuhl, were trained at the Ecole des Beaux-Arts of Geneva.

Progressive Architecture, Dec. 1950

Alexander Tranner's sketch for the famous Boulevard du Temple from the film Les Enfants du Paradis.

BOOKS

PITFALLS OF COLLABORATION

DESIGNING FOR FILMS. *By Edward Carrick. Studio Publications.* 1949. 18*s*. (*First edition*, 1941.)

Nothing is more agreeable than listening to other people's shop. Dustman's shop and dentist's shop. Artist's shop and ploughman's shop. And here we have art-director's shop, from an art-director who is a master of his craft. Carrick leads one into the subject, guides one down its main roads and its bye-paths and lanes, and takes one back to the front gate, with a clear over-all picture of one of the most complex jobs in the world. For an art-director has to be half artist, half chemist; half costing clerk, half illusionist; half scene-painter, half engineer; half historian, half physicist; half junk merchant, half architect. He must be able to design a study for Louis IVth and know that hail can be made by sprinkling broken moth balls out of a revolving, perforated drum. If one wants a snow storm, Meta-fuel cubes, melted on a hot plate and blown into the air with an electric fan, will do the trick.

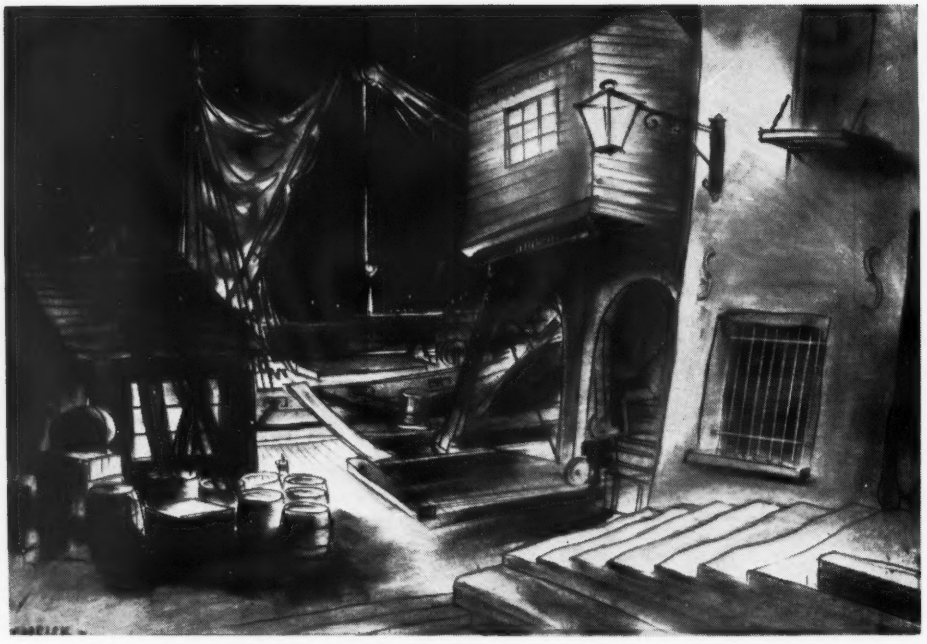
But Carrick's book is much more than a collection of tips and tricks. He makes one see through his eyes. He poses problems and solves them as we wait. He finds some illuminating parallels between the great book illustrators, such as Doré, and the work of a modern art-director. He discusses the place of the art-director in the team of artists and engineers responsible for that co-operative work of art, the film. Good artist that he is, he knows that the success of his work depends not only on inspiration, but also on administration. So there is a chapter on planning and execution. To all the interesting things he has to say, Carrick adds excellent critical appraisals of the work of some of his colleagues, and a splendid and varied collection of illustrations and diagrams. These alone make the book worth studying, though I regret that he does not show many sketches for sets alongside stills of the scenes as actually taken.

Carrick is less sure of himself when it comes to the philosophy of his subject. He seeks a world where the 'artist' will lead the 'people' to an ever more profound enjoyment of his art. To Carrick, a principal reason why his ideal cannot be attained seems to be that the film industry was founded by 'showmen' and is still in their hands. He calls for 'crazy comedies full of wit, social dramas keeping us awake to the realities of life, fantasies transporting us to the unknown, heroics to revive us.' These, he says, should 'be made from the finest material by inspired artists freed from the conventions of the other arts.' To many people, it seems that the entertainment film is in such a bad way, not because it is run by showmen, but because it is run by bankers, accountants, insurance brokers, corn millers—in fact, by people who have no glimmering of showmanship at all. If the showmen were vulgar and commercial, they also had a gusto which has all but disappeared from the industry today. A dozen Hamlets cannot make up for the absence of the Marx brothers. Chaplin was a showman straight from the East End Music Hall. Keaton was an acrobatic dancer. Carrick also attributes the decline of the entertainment film to the fact that the art of the film has become an industry under the control of industrialists, who are unscrupulous, grasping and irresponsible. Assuming that this is true, it is a pity that Carrick does not suggest a remedy. He apparently does not think this is to be found in small enthusiastic groups of artists, working in documentary and the *avant-garde*. These he calls 'training grounds for beginners.' Beginners for what? At present, beginners for the frustrating world of commercial production. Would Carrick recommend nationalization? What is his solution? It would be interesting to know.

And what, one wonders, are Carrick's views on the ever increasing complexity and expense of film production? Early in his book, he says, 'in films there are so many people to assist you in carrying out your ideas that unless you have a very clear conception of how it should be done the idea will be lost

Still from The Student of Prague, *a UFA production of* 1926.

during the process of translation into actuality. In making your ideas manifest you have to guard, too, against over-elaboration, lest you rob your spectator of the joy of using his own imagination to complete the picture.' Elsewhere, he talks of 'happy, hard-working, adventurous days' in 1928 or so, when he had to design, build and dress thirty-two sets in thirty-five days. Today, 'the films and studios are bigger . . . while responsibilities have been divided in order to try to get greater technical perfection in each department.' Today, Carrick tells us, the art department contains office boys, junior draughtsmen, second draughtsmen, senior draughtsmen, an assistant art-director, a set dresser, propertymen, a sketch artist, a scenic artist, an outside buyer. These are merely the people



Set designed by Edward Carrick for the film Jump for Glory *(Criteria).*

in the art department, which cannot be considered alone. There is a research department, which supplies data on request to the art department, and a department of decorative design.

I do not think the decline of the entertainment film can be attributed wholly to the commercial interests—blind and stupid though these are—which now control it. The personal afflatus and vanities of the creators themselves have had a part to play in the process. Today there are directors who feel hard done by if every shot does not require a crane, and if most of his sets are not as big as Buckingham Palace. May not history say that the recent version of Oliver Twist was merely a collection of technical and expensive high-jinks on the part of the art and camera department in no way superior to the simpler Dickens films made by George Pearson and his colleagues twenty years ago? It is worth remembering that one of the finest films of our time, *Day of Wrath*, had sets and art direction by Erik Aaes, equal to the best one sees anywhere. Yet the whole film cost only a shade over £20,000, and the sets were designed and built by a crew of six men—Aaes and an assistant, two carpenters, and two painters, who were also responsible for the plaster-work.

In Britain and the USA, the film is being strangled by technical devices and mechanics which are offered as a substitute for the showmanship which gave it birth. If the industry in Britain is to revive, a simpler and more human approach to film making will have to be found. Carrick's book proves that we have at least one art-director, with brilliance and common sense, who could play an important part in any such movement. **Arthur Elton**

NIEMEYER

THE WORK OF OSCAR NIEMEYER. *By Stamo Papadaki. Reinhold.* $8.50.

A book on one of the world's foremost architects is bound to be a noteworthy event, especially when, as in this case, it is the first attempt to collect together in one volume the work of a contemporary Brazilian. It must be hoped that further books will follow on the other leading figures who have helped to bring Brazil into the front rank of architectural progress; but Oscar Niemeyer was the obvious first choice.

An editorial introduction by Papadaki sets out briefly the international background from which the Brazilian movement developed. It also contains a much too brief appraisal of Niemeyer's work, and, apart from a note on the influence of climate, fails to bring out the nature of the environment in which the work was done. Then follows a foreword by Niemeyer's first master, Lucio Costa, which, although valuable, is also too short. It does, however, mention two important influences in the architect's development, namely the initial effect of working with Le Corbusier on the one hand, and a deep appreciation of the traditional architecture of Brazil on the other. Finally, before the illustrations begin, there is a three-paragraph statement of principles by Niemeyer himself.

The illustrative matter consists of twenty-three beautifully photographed examples arranged chronologically, and covers adequately the architect's creative span. It is a rich and varied assortment, and displays well Niemeyer's great imagination, his fine grasp of form and layout, the masterly ability to turn any functional programme into a lyrical composition of flowing space, and his sensitive handling of surface textures. Well brought out, too, is his fruitful collaboration with painters, sculptors and landscape architects (which is one of the most important Brazilian contributions), and his versatile use of traditional materials. Incidentally, the book does a useful service in recording a number of interesting architectural *causes célèbres*—although, for reasons which can be well understood, not all are fully described.

Admiration for this collection of brilliant designs is tempered by some sad thoughts. Niemeyer, although deeply sensitive of the appalling living conditions of so many of his countrymen, has not yet been able to use his outstanding talents for their improvement: most of his work has been of a luxury or semi-luxury character. As he himself says, 'Architecture must express the spirit of the technical and social forces that are predominant in a given epoch; but when such forces are not balanced, the resulting conflict is prejudicial to the content of the work and to the work as a whole. Only with this in mind may we understand the nature of the plans and drawings which appear in this volume. I should have very much liked to be in a position to present a more realistic achievement: a kind of work which reflects not only refinements and comfort, but also a positive collaboration between the architect and the whole society.' Architects everywhere will echo his wish. **Percy Marshall**

Shorter Notices

INDUSTRIBOSTÄDER. *AB Seelig and Co., Stockholm.* 8 *kronor.*

This is a record in photographs, plans and text of a selection of houses built between 1840 and 1950 by various Swedish companies who are members of the *Industriens Bostadsförening* (Industrial Housing Association). Its object is 'to pool housing experience and keep companies informed of government financing aids, provide statistical material, etc.' It now has 130 companies in its membership.

The size of industrial communities in Sweden has always been small and continues to be so. This has meant that the incentive to build houses to rent has been limited. On the other hand, Swedish workers are not in the habit of buying their own homes, owing to the high cost. Co-operative projects have partly solved the problem but limited liability companies have also had to provide houses for their staff and workers. Typical examples of their work are shown in this volume in the form of flats, detached houses and terrace houses. Some small-scale town planning is also illustrated.

On the whole, though living space is rather cramped, design is good in its simple way and often charming. Birch and fir trees usually grace the environment. The book has an introduction in English. **E. de M.**

Books Received

SMOOTH AND ROUGH. By Adrian Stokes. Faber and Faber. 15s.
GREEK TERRACOTTAS. By T. B. L. Webster. King Penguin, 3s.
STANDARD METHODS OF ANALYSIS. Published by The United Steel Companies. 17s. 6d.
THE STORY OF SCOTS ARCHITECTURE. By Ian Finlay. Douglas and Foulis. 3s. 6d.
ESCAPE FROM FIRE. By B. G. Phillips. E. and F. N. Spon. 16s.
THE GREAT EXHIBITION OF 1851. By Kenneth W. Luckhurst. Royal Society of Arts. 2s. 6d.
A CENTURY OF BRITISH PROGRESS 1851-1951. Six Lectures. Royal Society of Arts. 3s. 6d.
LETTERING ON SIGNS AND BUILDINGS. Georgian Group. 2s. 6d.
ROYAL FESTIVAL HALL. THE OFFICIAL RECORD. Max Parrish and Co. 30s.
BRITISH HOUSING AND PLANNING YEAR BOOK 1951. The National Housing and Town Planning Council. 6s. 6d.
PRIZES AND STUDENTSHIPS 1951-52. RIBA. 2s.
LOOKING FOR HISTORY IN BRITISH CHURCHES. By M. D. Anderson. John Murray. 25s.
THE STORY OF DURHAM CATHEDRAL. By G. H. Cook. Phoenix House. 5s.

IMPERIAL FORESTRY INSTITUTE, OXFORD — *Thomas Worthington & Sons, Architects*

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Chief Archt. : A. G. Sheppard Fidler, M.A., B.Arch., F.R.I.B.A., A.M.T.P.I.

The illustration shows a standard type factory built for the Crawley Development Corporation, with lantern light barrels. Reinforced concrete design is by Barrel Vault Roofs (Designs) Ltd. Reinforcement supplied by Twisteel.

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ANTHOLOGY

A Frenchman in St. James's Park

I have paid many visits, and taken several walks. The things which please me most are the trees. Every day, after leaving the Athenaeum, I go and sit for an hour in St. James's Park; the lake shines softly beneath its misty covering, while the dense foliage bends over the still waters. The rounded trees, the great green domes make a kind of architecture far more delicate than the other. The eye reposes itself upon these softened forms, upon these subdued tones. These are beauties, but tender and touching, those of foggy countries, of Holland. Yesterday, at eight o'clock in the evening, although the weather was fine, everything seen from the Suspension Bridge appeared vapoury; the last rays disappeared in whitish smoke; on the right, the remains of redness; over the Thames, and in the rest of the sky a pale slate tint. There are tones like these in the landscapes of Rembrandt, in the twilights of Van der Neer; the bathed light, the air charged with vapour, the insensible and continuous changes of the vast exhalation which softens, imparts a bluish tint to, and dims the contours, the whole producing the impression of a great life, vague, diffused, and melancholy—the life of a humid country.

H. TAINE (*Notes on England*),
Strahan & Co., London, 1872.

MARGINALIA

St. Anne and St. Agnes, Gresham Street

The church of St. Anne and St. Agnes, Gresham Street—one of the three to which Wren gave a quasi-cruciform interior with four columns standing in a quadrangular nave—is among the less seriously damaged of the blitzed City churches; its walls and tower are standing and much of the interior survives under its temporary galvanized iron roof. The re-organization committee of the London diocese now proposes that it should be demolished.

This proposal is so outrageous that it is difficult to find words strong enough to condemn it in. The REVIEW fully endorses the opinions expressed in a letter to the editor of *The Times* by John Summerson, in which he wrote:

'The Society for the Protection of Ancient Buildings and Mr. Gerald Cobb have both written in your columns to plead for the retention of the Wren church of St. Anne and St. Agnes. I write not so much to support their pleas as to ask whether it is not now absolute nonsense that there should be any argument about this matter at all. For 200 years Wren has been honoured as the greatest architect and one of the greatest all-round men of intellect this country has produced. For 30 years, at least, public opinion has been unequivocally against the demolition of his churches.

'There are now only 15 of them left (out of 50) with the bombed ruins of as many others. How can there be any question that St. Anne and St. Agnes, and the other 14, and the ruined shells are more valuable to us and to our children than the petty patches of expensive soil on which they stand?'

Mr. Summerson went on to point out that any doubts about Wren's authorship of the design of St. Anne and St. Agnes had been set at rest by the recent discovery of his own plan for the church, now in the possession of the RIBA.

Slide Index

The Circulation Department of the Victoria and Albert Museum has just issued a revised catalogue of the Museum's collection of lantern-slides on architecture, marking the completion of the recent reorganization and improvement of the collection. Slides can be borrowed by lecturers, free of charge if the purpose is educational and for a small fee in other cases. Copies of the catalogue can also be borrowed from the Museum.

The catalogue (listing something over 5,000 slides) consists of five sections, the first four dealing respectively with pre-classical, classical, post-classical and twentieth-century architecture, and the fifth being an index of architects. Small positive prints made up into albums form an additional visual index which can be consulted at the Museum.

Slim Volumes

The showing of country houses, which it has been remarked is fast becoming a major rural industry (at least in the summer months), is producing a heavy crop of guide-book literature in the shape of slim volumes, generally but by no means always paper-covered, to be bought at the same table as the tickets in the hall. In literary quality, informativeness, and accuracy these are as varied as one would expect. They are if anything even more varied in quality of production, the less ambitious as a rule being the more successful—or at any rate the least offensive: the possessions of certain noblemen are illustrated in colour plates which would surely bring groans from any of their ancestors' ghosts who had the misfortune to chance upon them.

Those country house guides which are written by owners or members of their family are rarely among the best. A very good one which comes into this category, however, is that to *Clandon Park*, by the Countess of Onslow. Clandon, which was shown for the first time this year, is a Leoni house, near Guildford, with a hall which rivals in splendour the better known one by the same architect at Moor Park, Herts, and chimney-pieces by Rysbrack which are not surpassed even at Houghton. Lady Onslow's guide, which with its eight photographs is sold for 2s. 6d., contains both a miniature history of the Onslows and a room-by-room description of the house; it is well written, and tells the ordinarily cultured visitor just what he wants to know.

James Laver's *Holkham Hall* addresses a rather wider audience and—gifted lecturer that Mr. Laver is—does so without giving anyone the slightest cause to feel that he is being talked down to. As a production this booklet, which is published by the Earl of Leicester at 2s. 6d., is elegant. Its illustrations include a dozen good photographs, reproduced usefully big (as the seven by nine-and-a-half inch format allows), together with ten really pretty drawings by Paul Hogarth.

Thirty more specimens of Paul Hogarth's talent are included in another recent publication

The small Banqueting Hall from the river walk by Paul Hogarth from Hampton Court, *published by Chetwynd Books.*

which, although it does not deal with a country house, belongs to the same class of literature. This is *Hampton Court: How the Palace was Built*, by Iris Morley. Published by Chetwynd Books, whose address is Hampton Court Green, it is a praiseworthy product of local enterprise—and another very good half-crown's worth.

War Damage Records

The question of the compilation and publication of a complete list of war damaged buildings of architectural interest in England was referred to in July *Marginalia*. Since then a letter from the Director of the National Buildings Record, Walter H. Godfrey, has appeared in *The Times*, stating that such a list has in fact been completed and can be consulted at the offices of the NBR. Mr. Godfrey added that he agreed that the list should be published, but the NBR had no funds for the purpose. Surely this is a clear case for His Majesty's Stationery Office to step in and assume the duty of publishing.

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3

Airways Office Architects (see pages 286-291). JAMES CUBITT, MBE (centre), born 1914 in Melbourne, Australia. Educated Winchester, Harrow, Brasenose College, Oxford, and AA Bedford Square: 1940-45, War Service in REs in West Africa, India and Burma: 1946-48, Studio instructor, Kingston School of Art and in private practice: 1949, Senior partner James Cubitt & Partners: 1951, Senior partner James Cubitt, Scott & Partners, Gold Coast. STEFAN BUZAS (holding up colour transparency), born 1915 in Hungary. Educated Vienna and Polytechnic and AA School: 1940-44, worked in various Architectural Offices: 1944-49, Instructor, Kingston School of Art: 1949, became partner, James Cubitt & Partners. G. V. RICHARDS (right), born 1924 Kingston-on-Thames. Educated Tiffins', Kingston-on-Thames: joined Navy 1941, Fleet Air Arm Pilot, demobbed 1946: Kingston School of Art, Department of Architecture 1946-49: AA School 1949-50: joined James Cubitt & Partners in 1950: assistant on Airways Office job.

DIGEST

Research Report*

Easily the most celebrated amongst the many riddles of architectural history is that of the origin of the Early Christian basilica, the shape of which, after all, determined the layout of most church building to come. Since Alberti's days scholars have tried to find a suitable prototype; but neither the theory that the Roman house, nor that the private or judicial basilica have been imitated by the architects of the first Christian churches has gone unchallenged or been generally accepted. Though in default of something better the judicial basilica carrying the same name as the Christian basilica and being equally a building with a flat ceiling supported by columns has most widely been considered the missing prototype. But in doing so several awkward facts have been overlooked. The latest Roman basilicas such as the Basilica of Maxentius were vaulted, and the main axis in Roman basilicas was, generally speaking, the one across the width.

A specially convened conference in Munich to consider the problem of the origin of the basilicas, to which gathered scholars from many lands (reported at length in *Kunstchronik*, May, 1951), left us much where we were. André Grabar (Paris) and F. W. Deichmann (Rome), who were the only speakers who touched the problem on hand at all, are in agreement that the meeting-places of the first Christians were modelled on the meeting-places of the pagan Romans; Deichmann defended his solution by stating quite rightly that the Romans used identical architectural shapes for divers purposes and concludes, wrongly I think, that the first Christian architects continued this practice. Grabar's brilliant thesis first expounded at length in his *Martyrium* and repeated in his paper in Munich of the Martyrium being the Christian version of the pagan Heroa and the proof he offers makes it quite clear that Christian architects had a conception of building different from that of the pagan Romans. Deichmann's functional derivation of the transept (added to enlarge the available space) is equally unsatisfactory and certainly not new (cf. Kirsch in *Römische Mitteilungen*, 1935).

Two general points, however, stand out. As so often in discussions of this sort some of the incidental remarks made proved of great interest, as for instance Deichmann's statement that Neon's Baptistery in Ravenna was originally covered by a wooden roof and only fitted with a dome later on, and excavation results reported from Aquileia and the Constantinian and subsequent churches at Trier. On the other hand, it was obvious again at Munich that investigations based entirely on formal criteria without sufficient foundation in either the character of the period discussed or surviving buildings can do no good. A case in point was M. Stettler's *Santa Costanza, Beispiel des Ubergangs* in which much is made of the Octagon of Antiochia, known only by descriptions. For this particular 'Ubergang,' from Roman to Christian, one should rather turn to I. B. Ward Perkins' *The Italian Elements in Late Roman or Early Mediæval Architecture*, 1949, noticed in THE ARCHITECTURAL REVIEW, Vol. 108, November, 1950, or better still to Axel Boethius 'Roman Architecture from its Classicistic to its Late Imperial Phase,' *Goteborgs Hogskolas Arsskrift*, Goteborg, 1941.

Excavations (described by René Louis in *Bulletin Monumental*, Vol. 108, Paris, 1950) at Nevers revealed a sixth century, that is still early Christian, baptistery following the plan frequently used in Italy and, it seems, particularly at Milan, of eight apses, four of them semicircular and four square.

Even if we still do not know how the first Christian basilicas came about, at least we know what they looked like; of the important phase of Christian architecture, the Carolingian, we cannot even say that. All the more important therefore is the paper by E. R. Sunderland on a Late Carolingian church at Charlieu in Burgundy, *The Journal of the Society of Architectural Historians*, Vol. IX, No. 4, Dec., 1950.

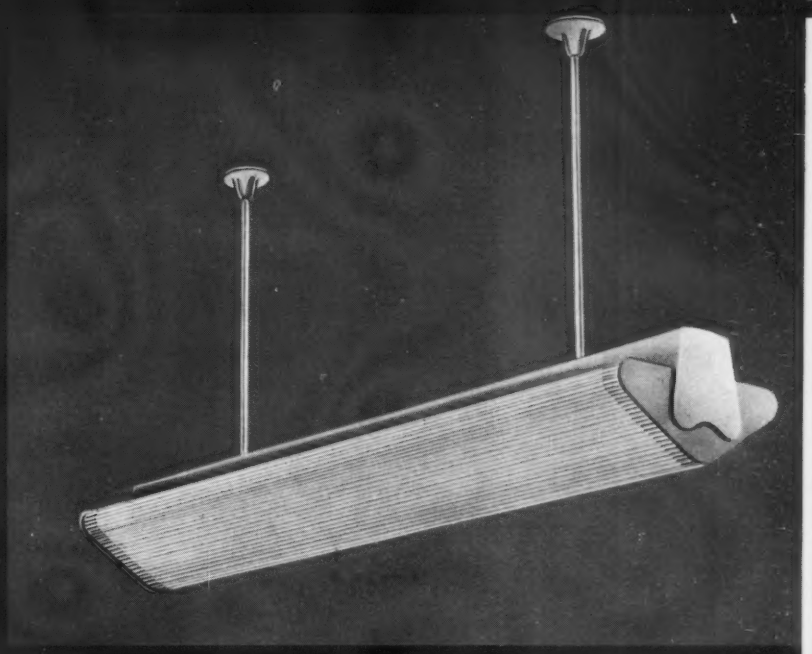
It gives a report of the second stage of excavations, first reported on in *Art Bulletin*, 1939, page 62 ff. The purpose of the excavations was to find the foundations of the first presumably Carolingian church on that particular site. The efforts were rewarded, and Professor Sunderland has made the most of the results by carefully analysing all known evidence, comparing it with similar and approximately contemporary churches. She has been able to put before our eyes a more than likely image of a building with four slender pointed towers (two at the façade, two next the apse), a feature which may well be interpreted as the forerunner of similar spires flanking several façades in Poitou. The ambulatory with an apsidiole half buried in the ground enabling pilgrims to see the relics in the crypt is a very important link between the wholly subterranean ambulatories of many crypts and the elevated ambulatory of St. Martin in Tours.

This feature of a half-submerged and now wholly subterranean crypt added at the apse of a church is taken up and treated at great length by A. Verbeek, 'Die Aussenkrypta,' *Zeitschrift für Kunstgeschichte*, Vol. 13, Munich, 1950, page 7, who describes in detail 52 monuments in France, Switzerland, Flanders and Germany mainly of the ninth, tenth and eleventh centuries. What the author has to say about the genesis of this type—mainly that it developed out of the wish to be buried as near as possible to relics of a saint (burial within the church was forbidden at that time), loses a good deal of its value through the fact that neither the results of Grabar's *Martyrium* (1946) nor of H. Glück's *Die Entstehung des Abendlandisches Wölbungsbaues*, Vienna, 1933, or H. Spiegel, *Zur Entstehung der Gang und der Hallenkrypten*, Josef Strzygowski Festschrift, Vienna, 1932, have been incorporated. Still, the connecting of such crypts, situated at the apse of a church half above ground and practically always dedicated to the Virgin, with the Lady Chapels of Gothic cathedrals is a most interesting point.

A very thorough and lengthy study of St. Martin de Tours and the origins of Romanesque style by F. Lesueur in *Bulletin Monumental*, Vol. 107, 1949, differs somewhat in its attempt at reconstruction of this most important landmark in architectural history from Carl K. Hersey, 'The Church of St. Martin at Tours' (903–1150), *Art Bulletin*, 1943. It is of particular interest for England since it traces influences in layout as well as in treatment of details from Trier via Normandy to English cathedrals

* This is a new feature which it is proposed to publish periodically: a digest of the most important of the articles giving the results of research into the history of architecture that appear from time to time in the world's art and architectural press. This month's report is contributed by S. Lang.

516P **Pendant.** Type: diffused general with direct downward light. ish: stove enamelled off-white. Perspex: $\frac{1}{4}$ in. internal reeds. Lamps: o 5-ft. tubular fluorescent. Control gear: with starter switches only.



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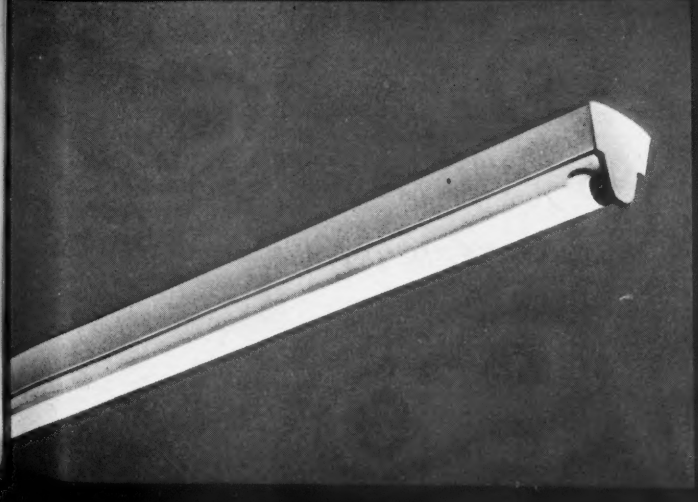
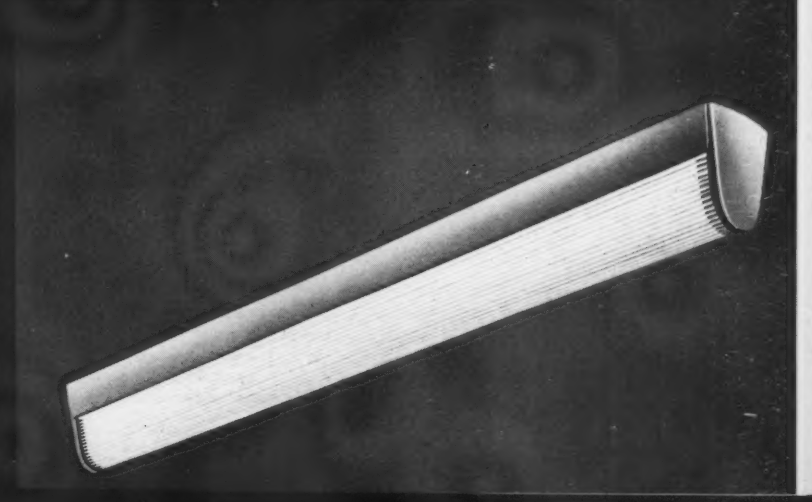
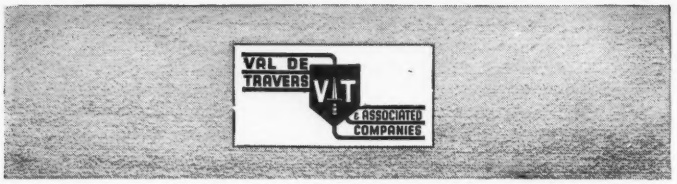


T.418 Ceiling. Type: diffused general light. Finish: stove enamelled off-white Perspex: $\frac{1}{4}$ in. internal reeds. Lamp: one 4-ft. tubular fluorescent. Control gear: with starter switch or Quickstart unit.





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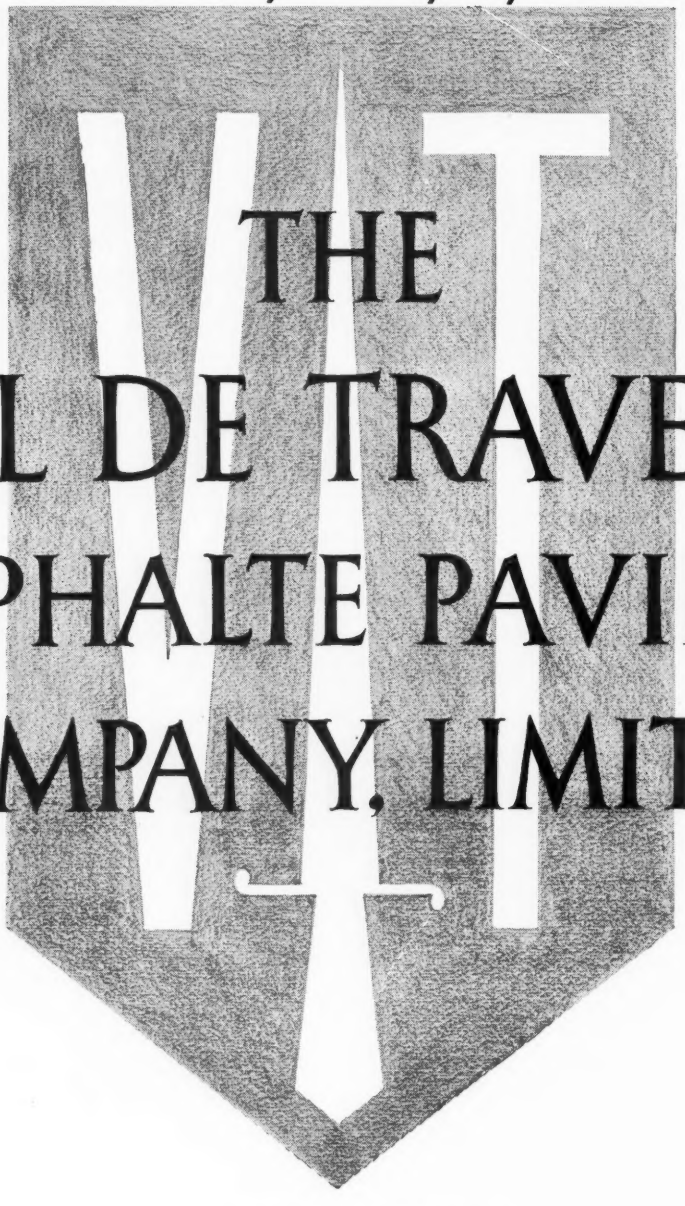

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4, Pays de Valais, near the Lake of Geneva *by J. R. Cozens, and* 7, Rue St. Denis, Paris, *by T. Girtin from the Arts Council exhibition 'Three Centuries of British Watercolours and Drawings' at the New Burlington Galleries;* 5, Procession *by Mané Katz from his exhibition at the Redfern Gallery;* 6, Landscape near Kingston *by John Minton from his exhibition at the Lefevre Gallery.*

(Ely and Winchester), besides assuming an influence as far south as Santiago de Compostella in Spain. If it could be permitted to offer such a cross-section through recent research as an indication of trends today and to draw conclusions from it, they are that at present an increase in factual information is more important than renewed æsthetic interpretations. There is always the danger that one may mistake the appearance of a building now for its appearance when it was built and that one may arrive at misinterpretations for sheer inadequacy of knowledge of original forth and meaning.

EXHIBITIONS

The last of the Arts Council Festival exhibitions was the *Three Centuries of British Watercolours and Drawings* at the New Burlington Galleries. Although it comprised no more than 215 works, as against the 371 from Mr. Leslie Wright's collection shown at Burlington House in 1949, the general standard was naturally much higher than any single private collector could be expected to maintain; also, the story was brought up to the present with examples of Henry Moore, David Jones, John Piper and other contemporary artists. Everyone who saw the exhibition will have his own special memories of it; nevertheless it is safe to say that no one will easily forget the row of nine Samuel Palmers, to examine which was to be consumed with an almost unbearable nostalgia for the Age of Gold. Among the other artists to whose qualities our era is particularly susceptible and who were well represented were Alexander Cozens, his son John Robert, Thomas Girtin and Francis Towne—the last coming off well in spite of the absence of any works from Mr. Oppé's collection (exhibited at Agnew's two years ago). Inigo Jones was represented by two of his drawings for masques from Chatsworth, Sir James Thornhill by two designs for ceilings, Francis Barlow (another painter of ceilings on occasion) by a hawking scene and another of animals in a landscape. Incidentally, Mr. Brinsley Ford's catalogue of this exhibition is a model of its kind and is worth getting hold of if only for the short biographies of the artists which it contains.

There have been two other exhibitions wholly or mainly of water-colours. At Tooth's, thirty drawings of the Loire Chateaux and twenty of English architecture and townscape by Dennis Flanders. Whatever one may think of the æsthetic quality of Flanders' work—it appears in the *Sunday Times*—there is something reassuring in the thought of anyone, in these days of snappy hap-shots, sitting down actually to draw buildings. At the Lefevre John Minton showed recent water-colours of Jamaica to the number of thirty-eight, together with five oils. The latter, though presumably intended as

a makeweight, had rather the opposite effect: they looked stiff and dingy alongside the always lively and sometimes moving works in the lighter medium by this very gifted artist.

To the east of Bond Street, both the Redfern and the Hanover have put on shows of artists well known abroad but newcomers to this country. At the Redfern we have had oils and gouaches by Mané Katz, who was born in Russia of Jewish parentage in 1894, became a French citizen in 1928, and lives in France; his vehement style is saved from blatancy by a fine

8 Interior *by John Melville from his exhibition at the Hanover Gallery.*

colour sense. The other newcomer—at least so far as the West End galleries are concerned—was the American sculptress Mitzi Solomon Cunliffe, who was born in New York in 1918, married an Englishman in 1949, and now lives in England. Mrs. Cunliffe modelled the hands on the doors of the Regatta Restaurant on South Bank; hers too was the *Root Bodied Forth* on the viewing platform of the Waterloo station entrance there. At present her work shows little consistency of style or purpose—if the Hanover selection was a fair one—and is not untouched by the kind of vulgarity that made a monster of the *Mother and Child* by Lipchitz in Battersea Park last summer. Contemporaneously with Mrs. Cunliffe's sculptures at the Hanover there was an exhibition of paintings by John Melville, who has a power of organizing space which is both uncommon and undervalued today; his figures—invariably of the female sex—often have a sort of devil-may-care vitality which sets them apart from the inhabitants of most other artists' worlds.

Correction

The photograph from the exhibition 'Aspects of Form,' organized by Richard Hamilton at the Institute of Contemporary Arts, which was used for the cover of the October issue, should have been credited to the Cavendish Laboratory, Cambridge.

On page 258 of the same issue in the article 'Roger North and Sir Christopher Wren' the phrase 'a man with a mechanical head and a philosophical mind' was an incorrect paraphrase of Robert Hooke's famous remark about Wren having 'so mechanical a hand and so philosophical a mind.'

INTELLIGENCE

Hugh Casson, who was recently appointed Reader in Interior Design, has now taken up his duties at the Royal College of Art.

Mies van der Rohe is the designer of a chapel which the episcopal diocese of Chicago is to build on the southern campus of the Illinois Institute of Technology.

An international exhibition of architecture is being held in conjunction with the first Biennale of the Museum of Modern Art of Sao Paolo, Brazil, from October to December, 1951.

The Ministry of Works has issued a twelve-month season ticket costing £1 which admits two people to some 400 of Britain's ancient monuments in the Ministry's care.

Glenn Stanton of Portland, Oregon, has been elected president of the American Institute of Architects for the coming year. His work includes the building for a publishing company, a departmental store and a number of Christian Science churches and school buildings.

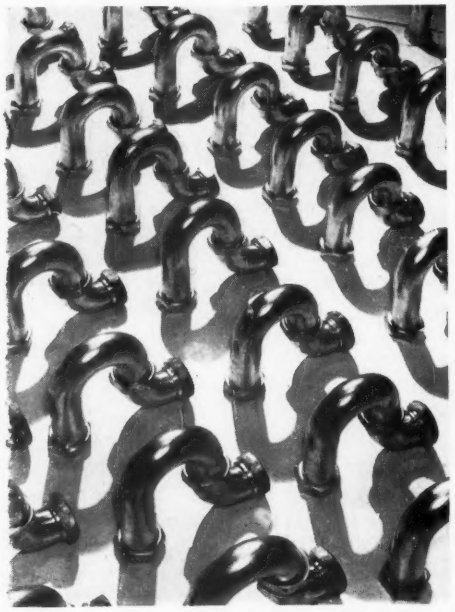
CORRESPONDENCE

Dutch Brickwork and Copper Traps

To the Editors

THE ARCHITECTURAL REVIEW

DEAR SIRS,—I wonder whether you would be kind enough to ask Mr. Smith-Raeburn to criticize the enclosed copy of our print No. 38563.



The comments he made about Dutch brickwork, under the heading 'Townscape,' in your April miscellany, are a little bit above my head, but I think I see what he is driving at.

These tubular copper traps are purely functional and, perhaps because I have designed them, I think they look very fine in this particular photograph. If Mr. Smith-Raeburn doesn't agree with me I wonder if you could persuade him to take the time to say why. Ask him not to 'wrap it up ' at all. I can take it on the chin.

Yours, etc.,

HUGH GOLDER,

Birmingham. Econa Modern Products Limited.

Mr. Smith-Raeburn writes: '*I have no criticism. Mr. Golder's tubular copper traps look fine to me too. The person who seems to have had some doubts about their looks is the photographer, who has managed to turn them into a May Day parade of looper caterpillars; not that it isn't an effective photograph. No one . . . I was going to say that no one had ever tried to* art up *tubular copper traps—but I expect someone has. Still, the temptation to do so isn't very great. It is when objects get more out into the open than tubular copper traps often do that they become self-conscious—with what deplorable results my note on Dutch brickwork showed.*'

The Senate House Cleaned

To the Editors

THE ARCHITECTURAL REVIEW

DEAR SIRS,—I read with interest Marcus Whiffen's excellent article on the Senate House, Cambridge, but was surprised to see that he attributed it to James Gibbs.

I always thought that it was agreed that it was a work of that well-known dilettante Sir James Burrough, and this is borne out by the Architectural Society's Dictionary which quotes from Dallaway 'anecdotes' London, 1800, pp. 99–112, which says: 'To all that is excellent in the architecture of the Senate House sir James Borough [*sic*] has a better claim. The executive part was superintended by Gibbs.'

Though I can claim no descent from my eminent namesake I at least feel it my duty to defend the name.

Yours, etc.,

Bristol. T. H. B. BURROUGH.

Mr. Whiffen writes: '*I appreciate Mr. Burrough's kind choice of epithet for my brief note on the cleaning of the Senate House. Sir James Burrough admittedly produced some sort of design for the building, which Gibbs took away to improve (see Willis and Clarke). But in the realization of an architectural idea basically as simple as the Senate House the things which go under the head of "improvements" count for everything. In any case, Gibbs published the design in his* Book of Architecture *in* 1728 *as his own—and remained* persona grata *at Cambridge. Mr. Burrough, as he says, is actuated by a desire to defend his name, and that is altogether laudable. There is, however, a general tendency not to allow poor Gibbs the credit of his own works, of which the attribution of the Senate House to Burrough is but one result. It is only within the last year that anyone (Mr. Laurence Whistler in this case) has noticed that "Vanbrugh's" Boycott Pavilions at Stowe are also given in Gibbs's book.*'

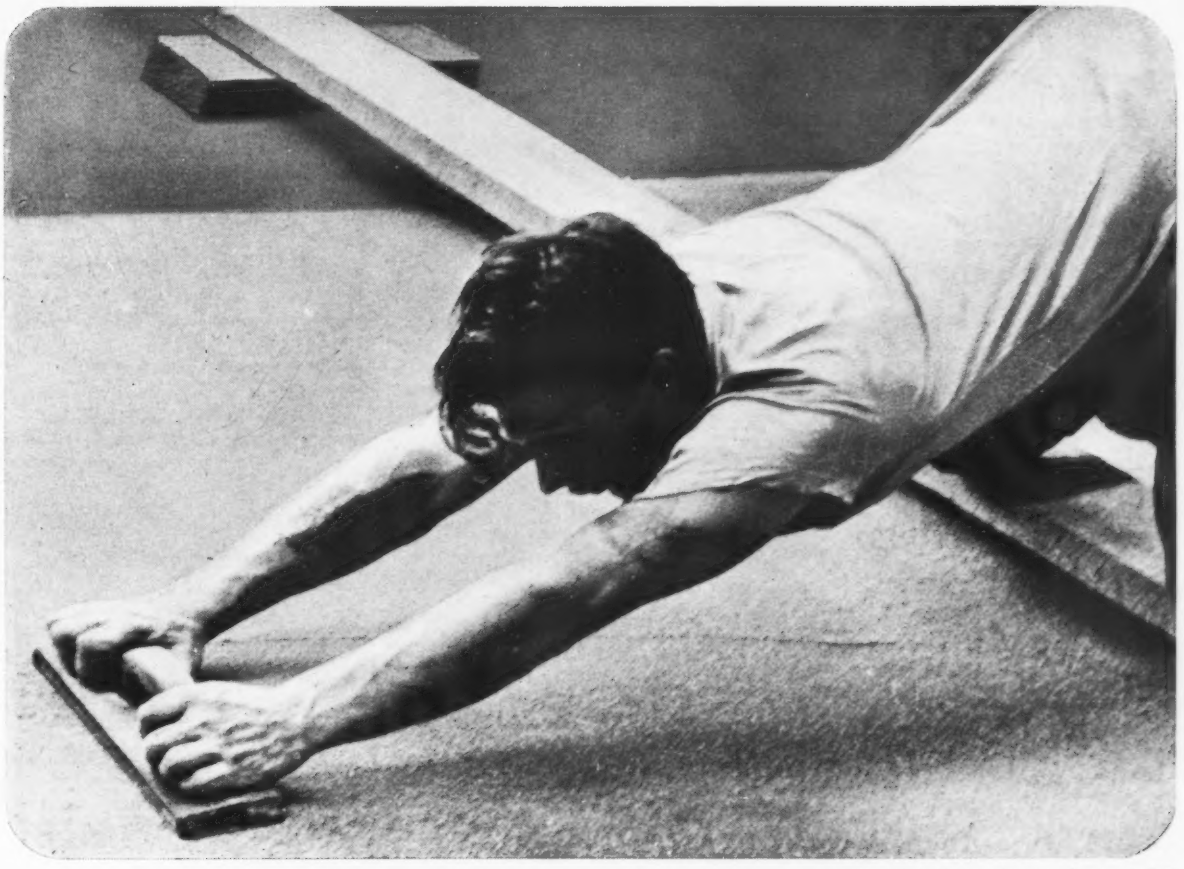
TRADE & INDUSTRY

Royal Pavilion

One of the neatest buildings at the South Bank, and one of the least obvious, since it stands apart from the main exhibition, outside the Chicheley Street Gate, is the Royal Pavilion. Partly concealed by rhododendron shrubs and

9 *The Royal Pavilion at the South Bank Exhibition designed by the Architects' Co-operative Partnership.*

[continued on page 342



Photograph: Courtesy Highways Construction Ltd.

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continued from page 340]

standing in a pleasant little garden, this essay in plywood construction is a most interesting structural development and certainly a new departure in Royal retiring rooms.

It is built on a heptagonal plan, seven laminated timber arches converging on to a central circular laminated ring. The timber is of ½ inch laminations of selected Douglas fir and each arch has a span of 33 ft. 10 in. At the base, the arches are linked to specially constructed steel fittings with pin joint connection. Scarf joints are formed at a ratio of 1 in 12. A casein cold-setting glue, as developed for aircraft propellers, was used for the laminations and the protective finish is a special propeller varnish.

The roof is of stressed-skin plywood construction formed by two skins of exterior ply panel grade on an internal timber framework.

The span of the building is 60 feet, the height 23 feet. It was designed by the Architects' Co-operative Partnership and built by Samuel Elliott & Sons, Ltd.

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DIA Yearbook

No organization has a better right to a share in the credit for the South Bank and other Festival of Britain achievements than the Design and Industries Association. Since 1915, it has striven as a body, and its members have worked individually to show how a high standard of design could make everyone's life easier and more pleasant.

To celebrate 1951 the DIA has produced its most ambitious Yearbook yet, containing information on design, designers, design organizations, books and pamphlets on design, and special articles. All this material has been collected specially for this publication and is unobtainable anywhere else in this collected form.

Design and Industries Association, 13, Suffolk Street, S.W.1.

House of Lords

With the departure of the Commons to their new Chamber, the Ministry of Works recently undertook the refurbishing of the House of Lords prior to their Lordships' return. The latter wished the general character of the Chamber to remain unchanged, but this raised awkward problems for the lighting engineers since Pugin's original light fittings, originally designed for gas and subsequently adapted to support six clusters of five bare 40 watt lamps, had to be retained yet made more efficient. The problem was solved by replacing each cluster with a single 150 watt lamp accommodated in a standard Holophane enclosed prismatic reflector unit. By this means an average illumination intensity of 9 foot candles on the working plane as against the previous 1.5 foot candles has been achieved, despite the reduction in wattage from 1200 watts to 900 watts. A brass trumpet-shaped fitting has in addition been inserted inside the body of the metal fitting to face upwards, and these lamps now illuminate the magnificent painted ceiling which hitherto has been practically invisible behind the glare created by the clusters of bare lamps.

10, *the original Pugin light fittings in the House of Lords with Holophane reflector units added.*

Holophane, Ltd., Elverton St., S.W.1.

The Building Exhibition

On November 14 next, the twenty-fourth Building Exhibition opens at Olympia. This year, due to the demand for space, it will for the first time overflow into the Empire Hall. One of the most interesting features will undoubtedly be the large display which occupies the whole of one side of the National Hall and deals with the craft of masonry. Designed and organized by Lawrence Wright, ARIBA, who has had the co-operation of many individuals, organizations and firms in the trade, the display surveys this ancient craft in all its aspects. It

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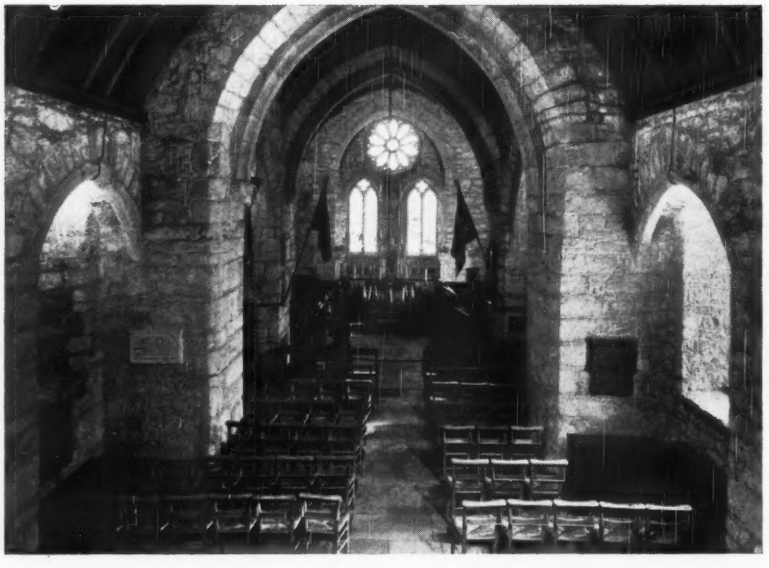

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The Church

The character of the church is predominantly of the late fourteenth century.

Among alterations to the church during the fifteenth century was the insertion of two rose windows of unusual and very effective design. The timber roof appears to have been repaired at the same time, if not entirely remade.

The gilt brass chandelier appears to be an original Flemish work of the late fifteenth century.

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continued from page 342]
serves to underline the awkward fact that as the demand for experienced masons grows their numbers fall due to a declining rate of recruitment. The recent repairs to Salisbury Cathedral have been given a special part in the exhibit, and samples of the stone from top of the spire are included. The part that the machine now plays in the mason's craft is fully illustrated. In another section of the Exhibition a selection of architectural drawings from this year's Royal Academy will be on view together with those for the projected Coventry Cathedral by Basil Spence, FRIBA.

The Government Departments will be represented by the Department of Scientific and Industrial Research, the Building Research Station and the Ministry of Local Government and Planning. The BRS has recently been examining the application of small tower cranes to house-building and the design and construction of steel and concrete bridges, and both problems are dealt with on its stand. The Ministry has two stands. One deals with house planning and means whereby costs can be reduced without lowering the essential standards of room space. The other deals with the layout of new towns with particular reference to Stevenage and Harlow. The Development Associations and Trade Associations will be there in force, while of special interest among the general exhibitors will be displays of the mechanical equipment which is steadily replacing hand-processes in the Building Industry.

Improvements at Waterloo

One of the secondary objects of the Festival of Britain was to induce a national tidying-up campaign and the result has been that all kinds of odd corners have suddenly been transformed by a coat of paint or just a wash and brush-up. The gloomy caverns under Waterloo Station and the approaches which lead to the Underground, for long a real black spot to South London commuters, have not only received their coat of paint but have also been completely transformed by fluorescent lighting. Falk, Stadelmann batten fittings have been used throughout and despite the relative lowness of the ceilings for this type of unscreened lamp, the glare has been largely eliminated by the use of light colours for the ceilings.

Falk, Stadelmann & Co., Ltd., Farringdon Road, E.C.1.

11, the new Falk, Stadelmann fluorescent fittings at Waterloo Station.

New Factory

Opened recently at Wishaw, Lanarkshire, a new factory for Smith's English Clocks is devoted entirely to the mass-production of alarm clocks. It is considered the finest of its kind in Europe and was designed after close study of many of the latest flow production factories in Europe and America. With a floor area of 150,000 square feet it is considerably larger than the factory at Carfin nearby, which it replaces, although the latter is only five years old. Production will eventually be increased from 55,000 to 90,000 clocks per week. The architect is L. W. Hutson.

Smith's English Clocks, Ltd., Cricklewood.

Publications

Welded Roof Trusses. This booklet is intended for fabricators on a relatively modest scale and deals with the design of trusses and joints, welding procedure, truss layout and outlines the essentials of loading and stresses.

The Design of Welds. To exploit the many advantages of welding to the full, it is necessary to design for welding. This booklet is intended to assist the designer to arrange his welds most economically and correctly to calculate the size of these welds. Both booklets are issued by the Quasi-Arc Company Ltd., Bilston, Staffs, and are available free on request from the Constructional Design Department.

Good Painting of Buildings. Some £80,000,000 a year, it was recently estimated, is spent in Britain on the painting of buildings. This booklet sets out to show how the proper selection and application of paint can result in better

[continued on page 346

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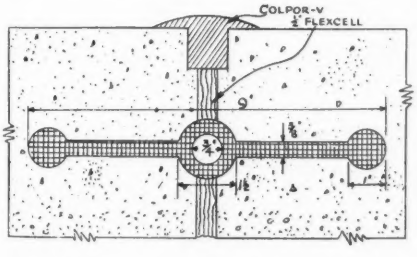

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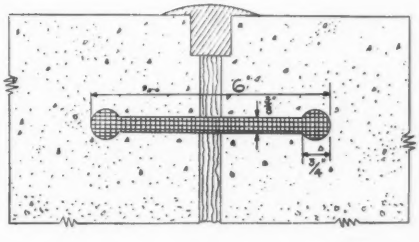

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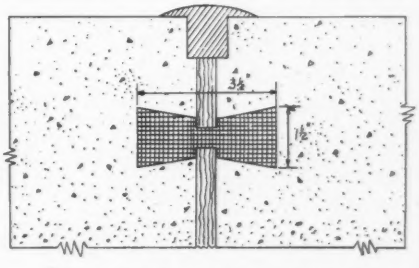

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continued from page 344]

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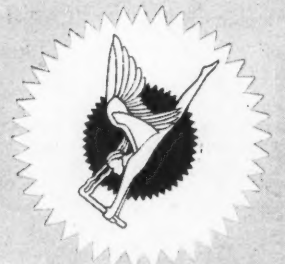

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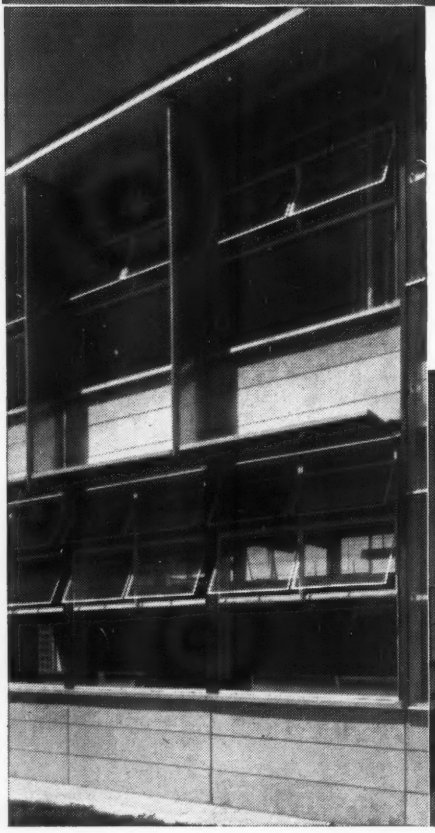
Windows to look at...

Today, at the new Stevenage School, the windows and doors have become showpieces of skilled design and manufacture: a tribute both to the Architects, F. R. S. Yorke, F.R.I.B.A., E. Rosenberg *and* C. S. Mardall, A.R.I.B.A., *and also to the window-makers they specified:* Williams & Williams Ltd., *of* Chester.

The new Stevenage school is a study in the intelligent use and manufacture of windows: they form, with their slender, graceful lines, an attractive and yet strictly economical cladding to the structural steel frame. Vast areas have been filled with glass and steel. Nevertheless on examination it will be seen that the amount of metal used is surprisingly small. The Architects planned an 8 ft. 3 ins. window module, and Williams & Williams engineers designed a series of standardised components which were assembled in different ways for each category of window in the building.

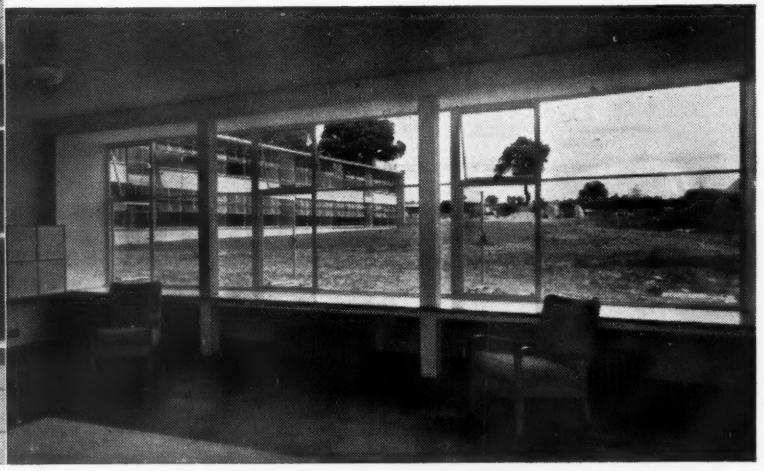
The window most generally used had a fixed light below transom and opening lights above. All the latter were interchangeable—a factor which greatly facilitated erecting and glazing. The stanchions were masked externally by uniform pressed metal cover plates and no screws or bolts were visible.

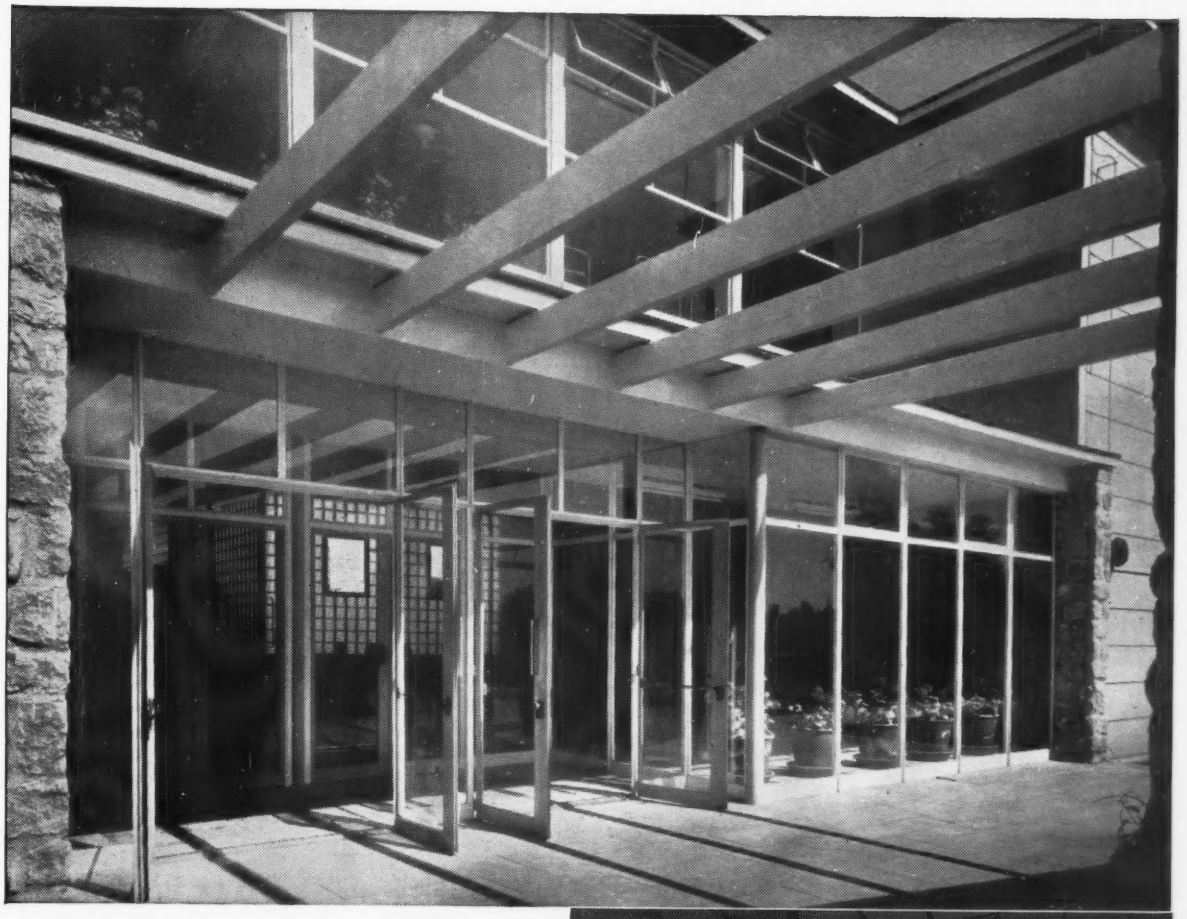
Four in one The main staircase window is composed of four 8 ft. 3 in. module units set in an opening 33 ft. × 20 ft. Williams & Williams made the transoms form the bracings for the stanchions, eliminating the need for heavy-looking structural steel members. The result is a simply-styled window perfectly in keeping with the character of the building.



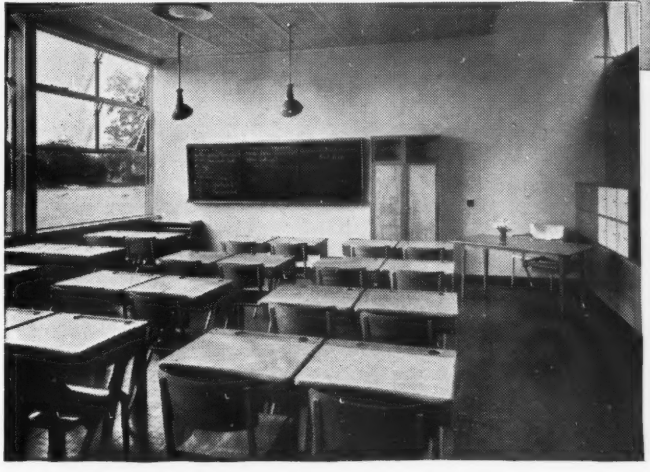
Windows with fins Streamlined aluminium sunshields, deflectors and cills (left) specially designed for the building by Williams & Williams form part of the windows of the special subject classrooms in the main block. The vertical fins are 12 ft. high and project 1 ft. 9 ins. The horizontal deflectors which shield the ground floor windows from overhead sunshine are pivoted to raise and lower for ease of cleaning.

Staffroom with a view The light and pleasant staffroom (below) is an example of the use of Williams & Williams windows to fill wall space to advantage. The area is spanned by a range of alternating fixed and opening lights, the metalwork of which is neatly proportioned both for the sake of appearance and for economy in the use of steel. Through these windows the sunlit south elevation of the main classroom block is clearly visible.





Loggia entrance The photograph above shows the main entrance to the new Stevenage School. It is a happy combination of good design and adroit use of standardised purpose-made units. The metal doors are well-proportioned and in keeping with the range of sidelights to the right and also with the sunlights above. It will be seen that Williams & Williams have incorporated the structural round columns of the building in the general window design and have given special emphasis to them, using them as the main mullions. Above the main entrance a series of the general windows accord naturally with the overall style of the entrance facade.



A light hall Doors and windows along the two longest sides of this hall offset the comparative lowness of the ceiling and contribute to a light and airy appearance.

One of the class rooms This classroom is typical of the new Stevenage school: the main windows on the left are of the general pattern, on the 8 ft. 3 in. module, and there are also smaller windows along the top of the right hand wall to increase the admission of daylight.

The aluminium cills and pressed metal stanchion plates and sun deflector fins at Stevenage School were so well liked that these features are now being incorporated in other schools, together with windows and doors designed and made by **Williams & Williams Ltd.** *at the* **Reliance Works, Chester.**

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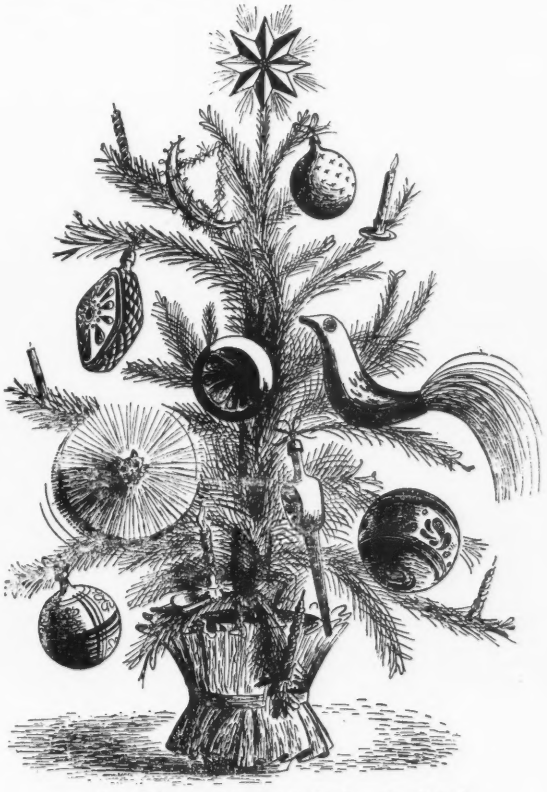

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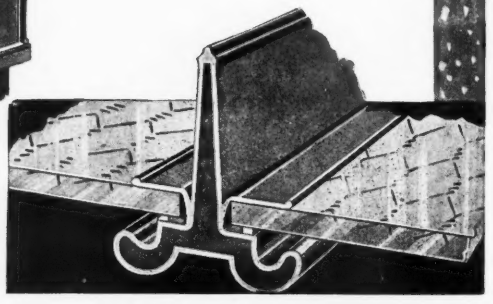

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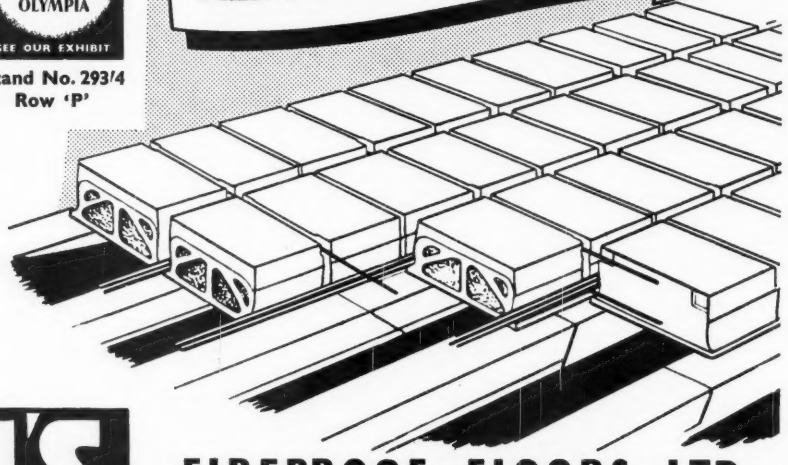

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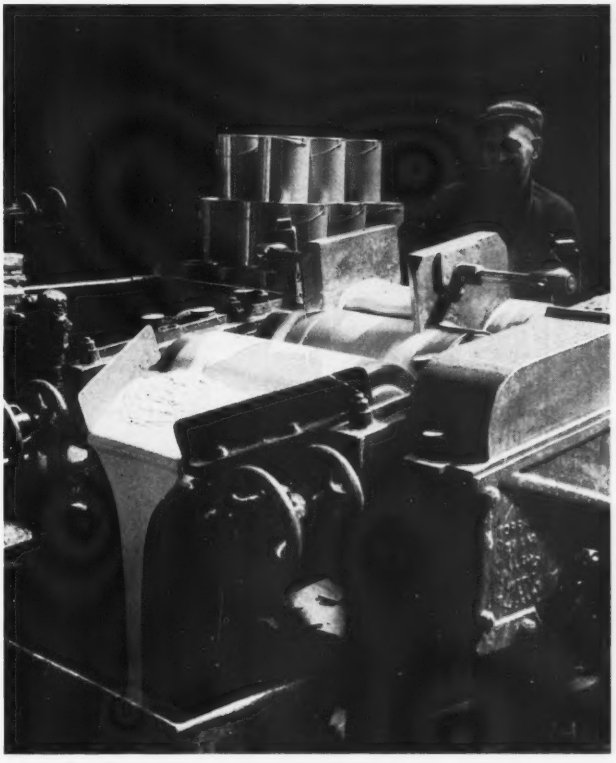

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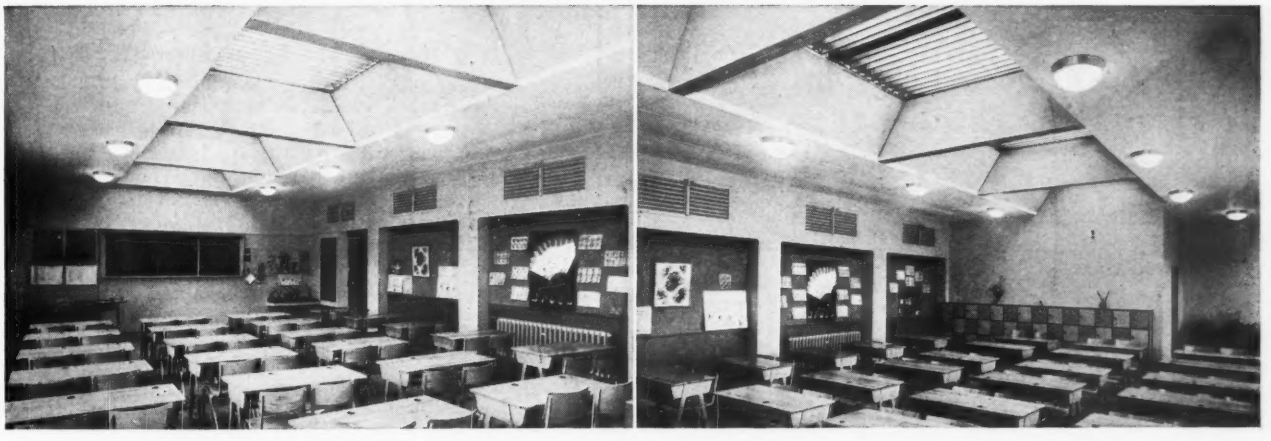

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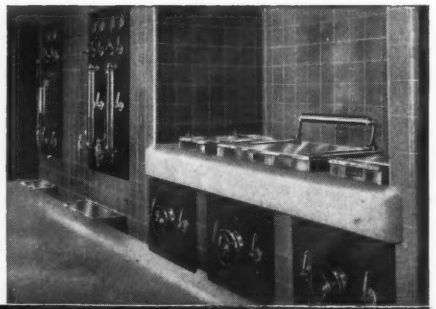

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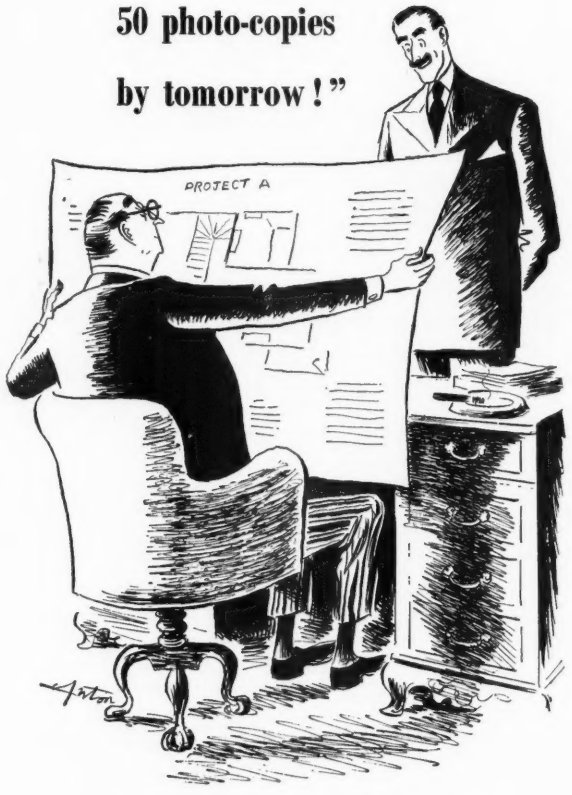

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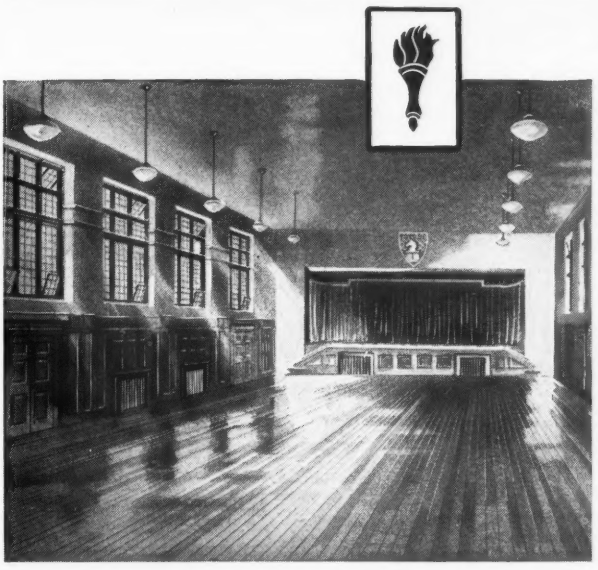

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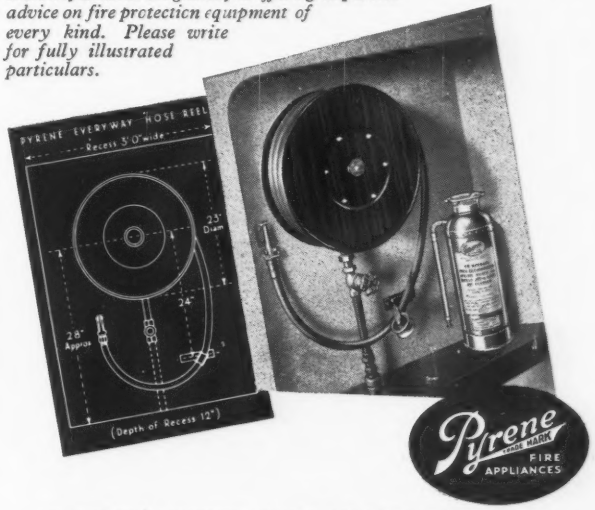

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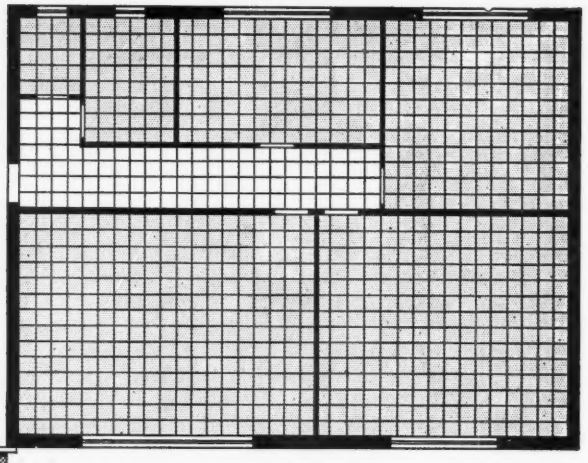

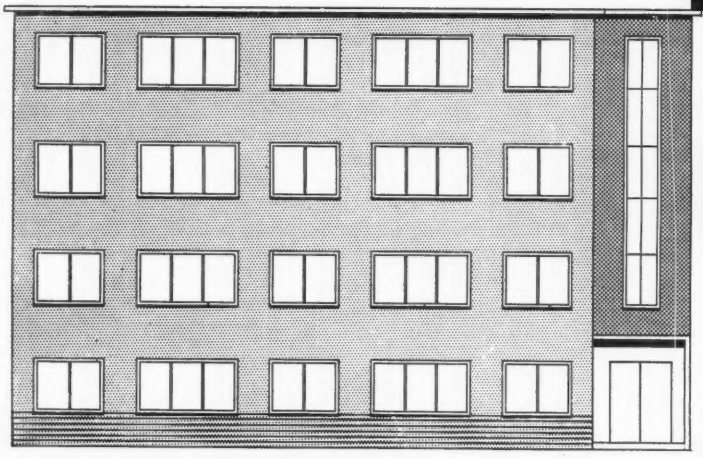

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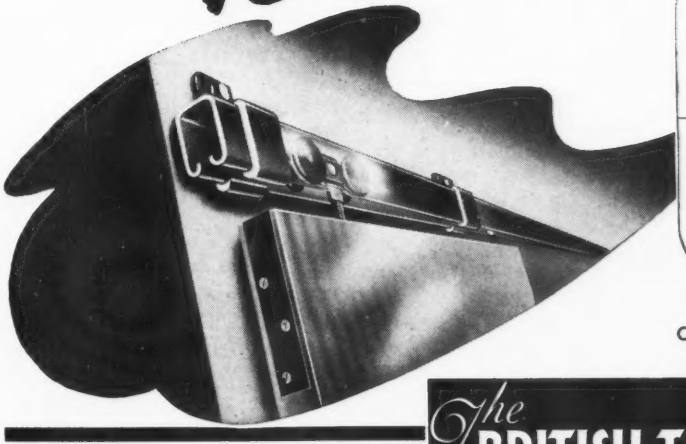

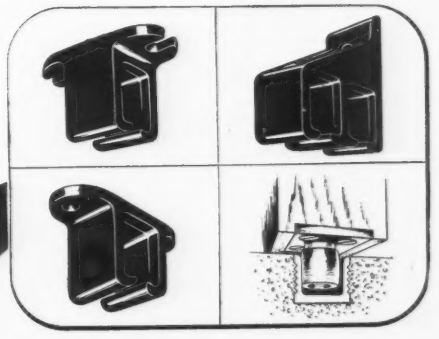

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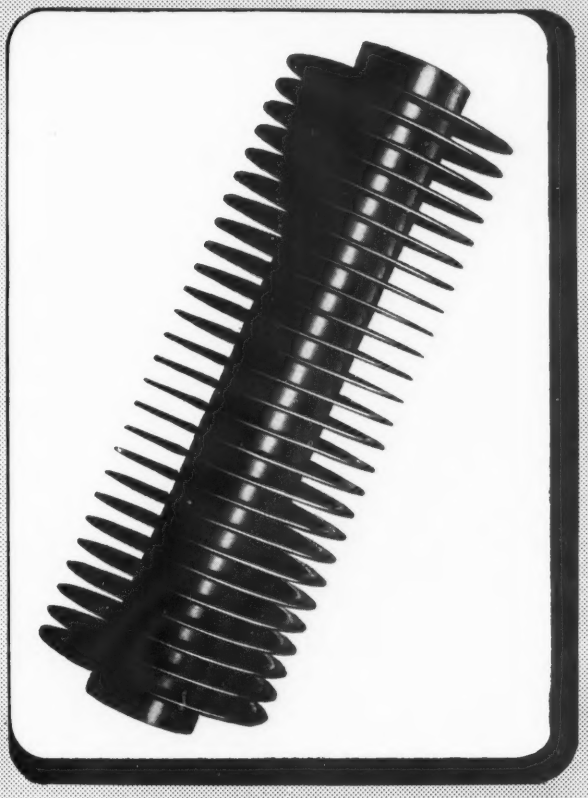

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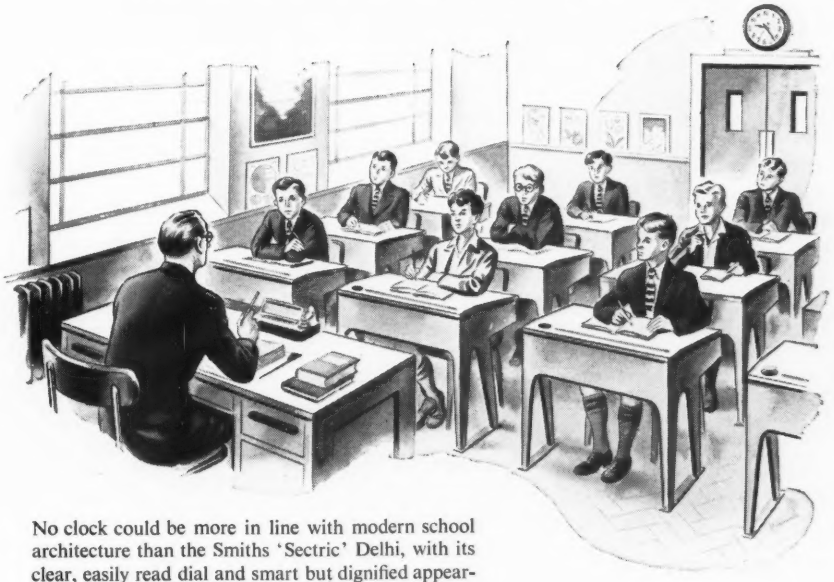

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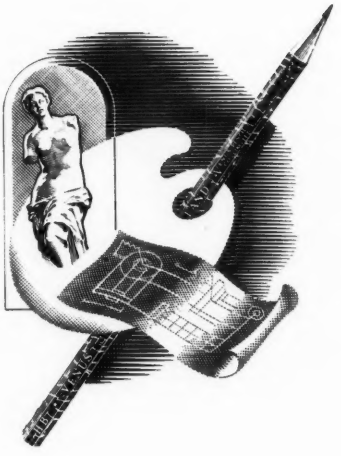

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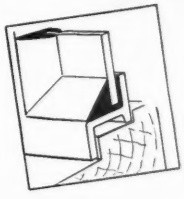

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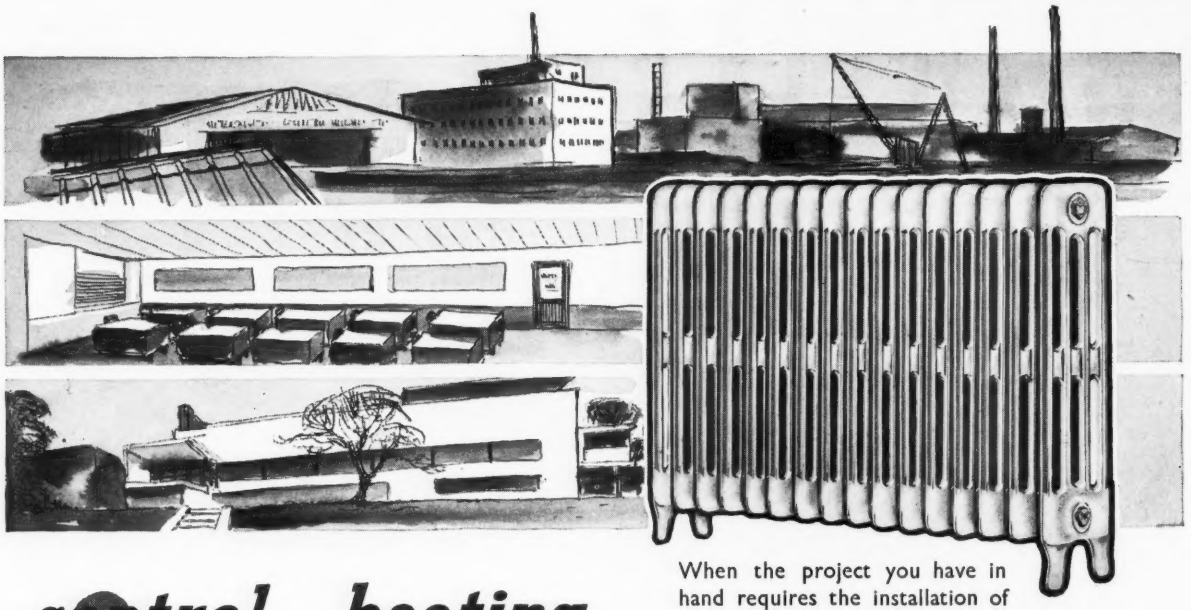

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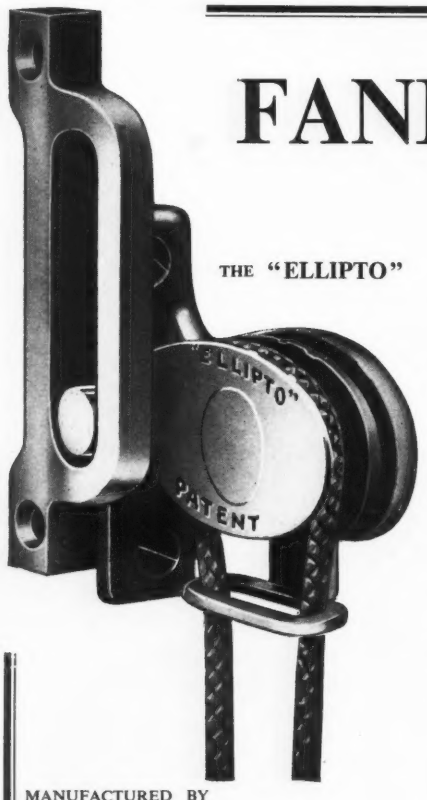

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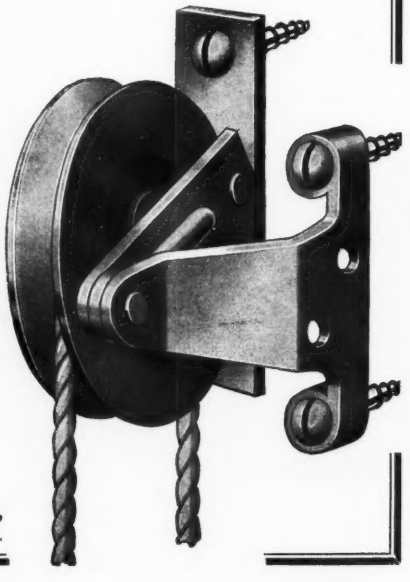

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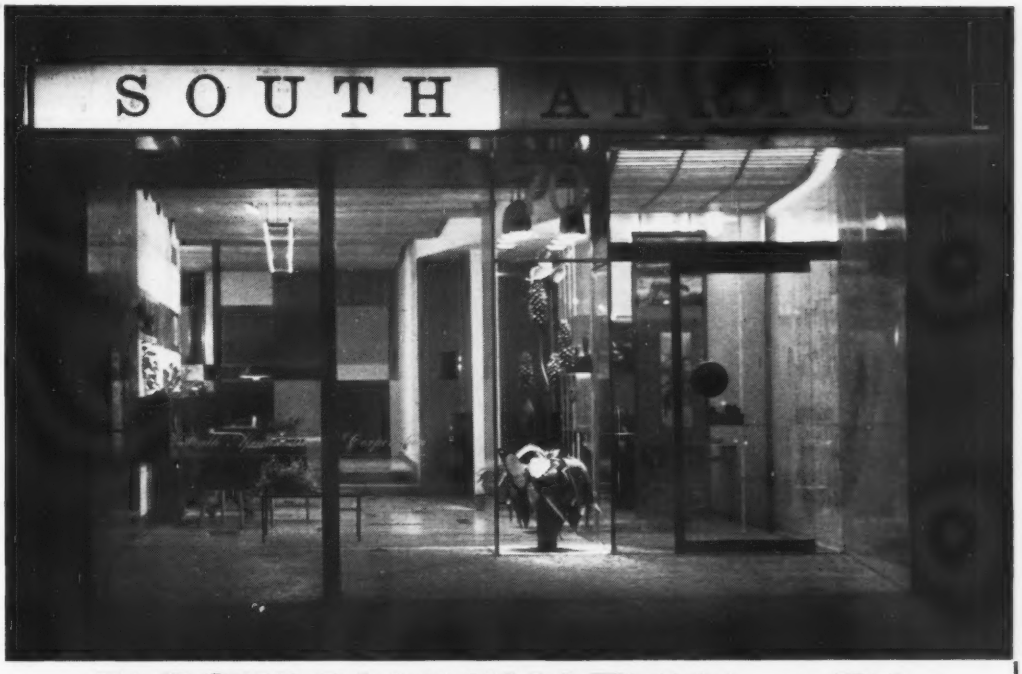

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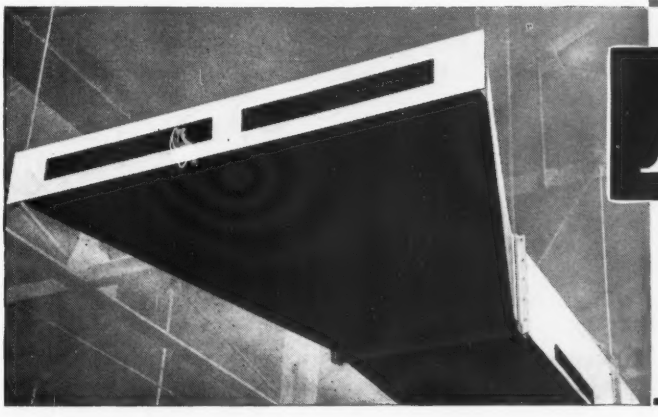

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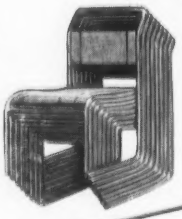

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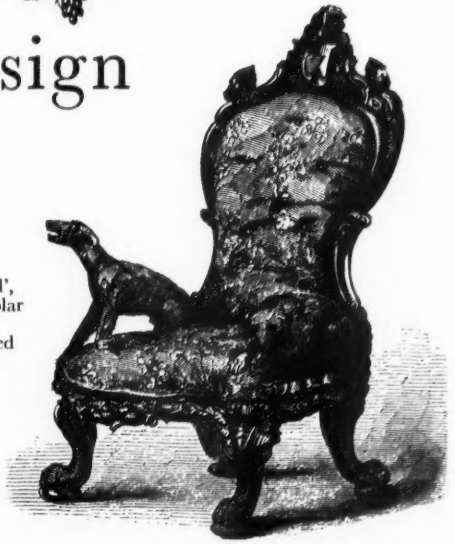

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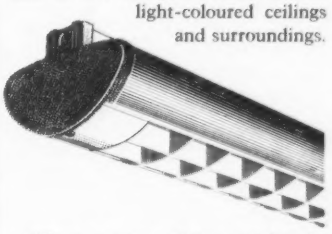

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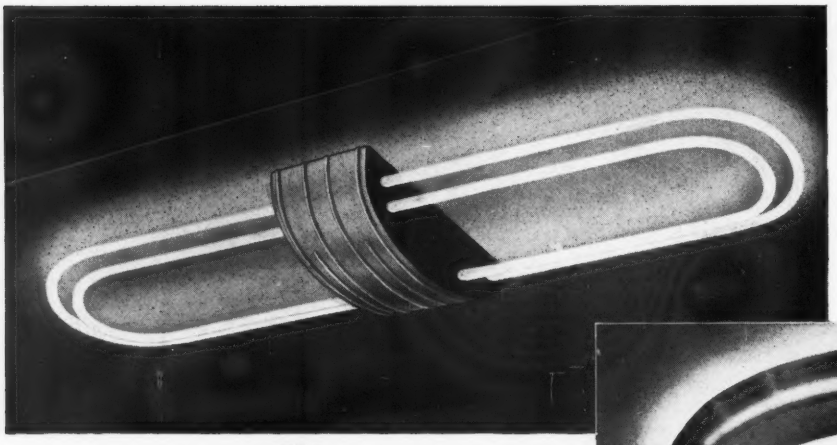

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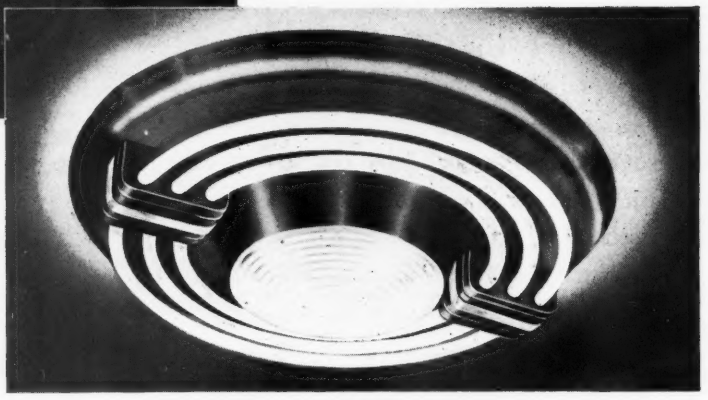

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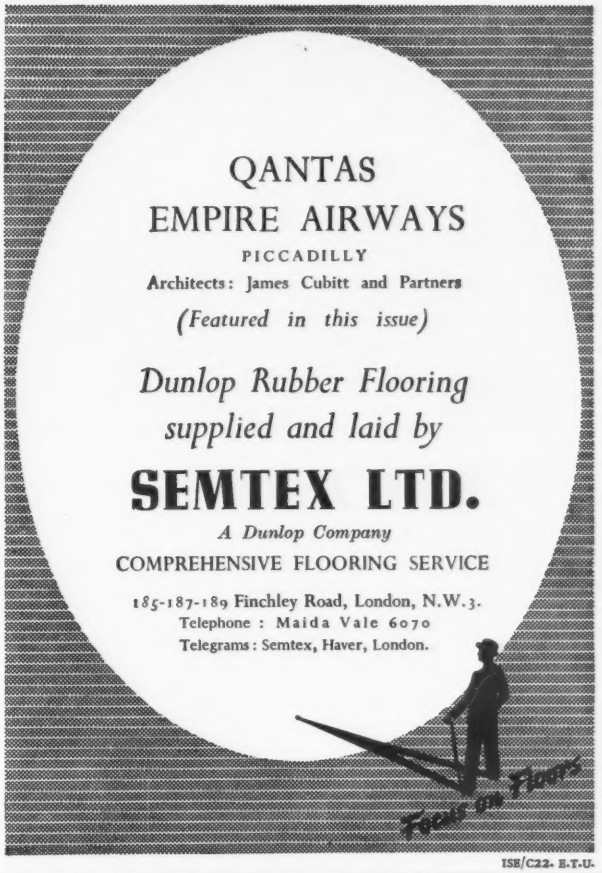

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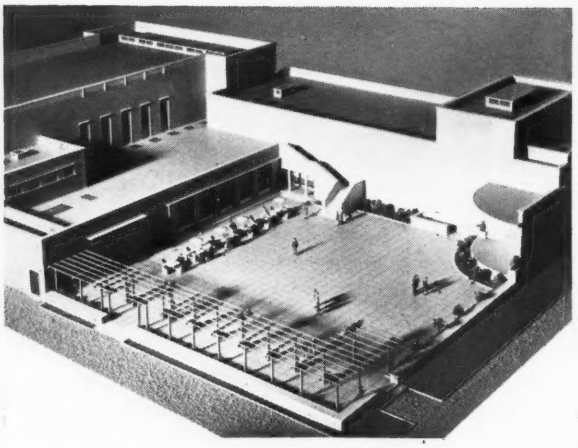

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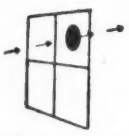

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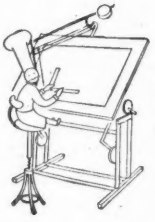

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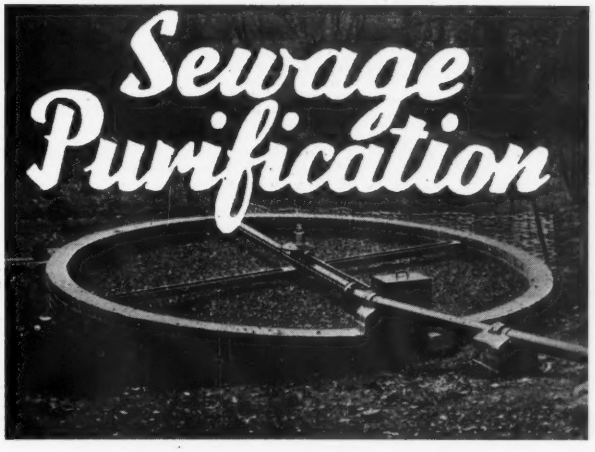

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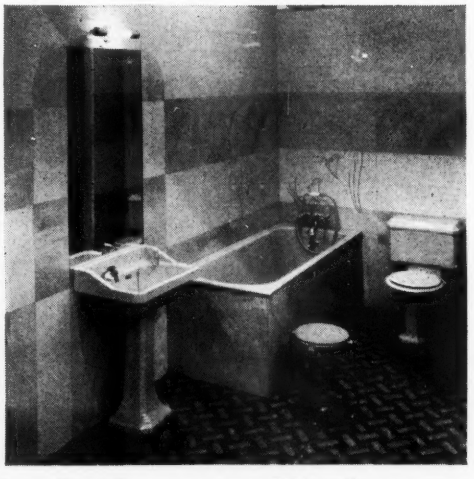

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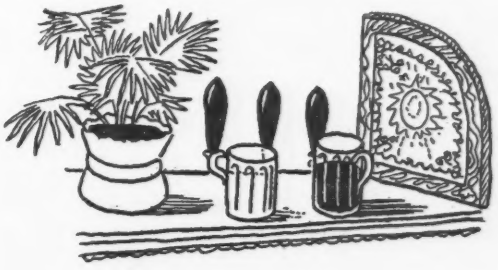

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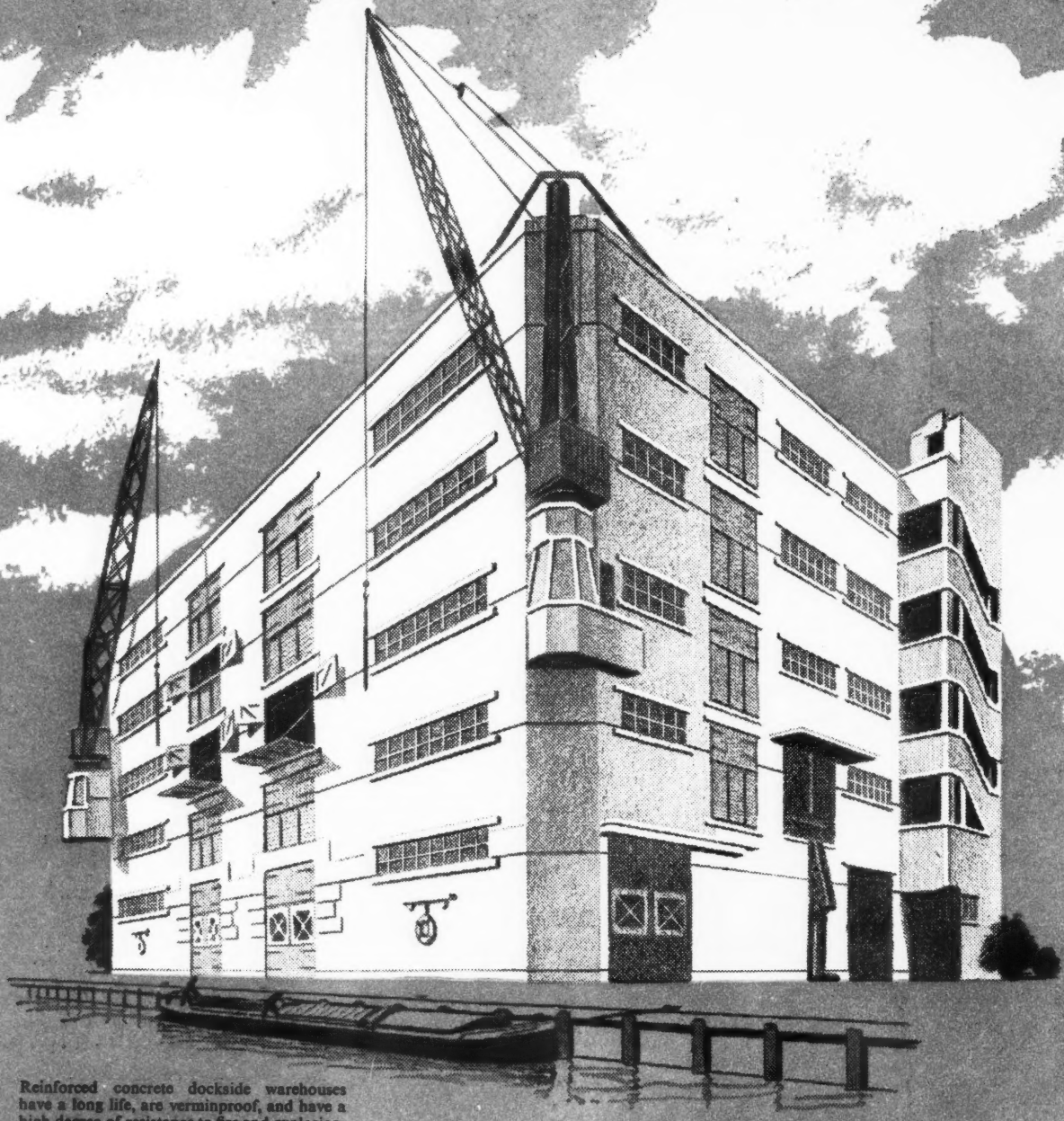

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